

KP-46XBR25/53XBR25/61XBR28

RM-Y114A

SERVICE MANUAL

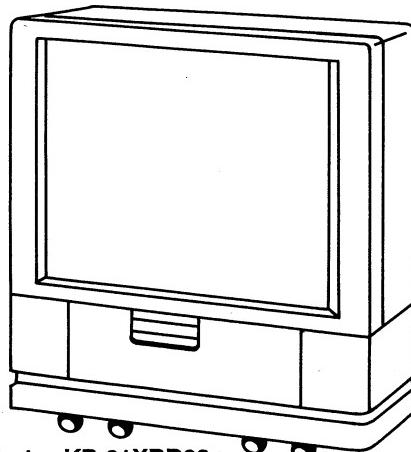


Photo: KP-61XBR28

US Model

KP-46XBR25

Chassis No. SCC-F19J-A

KP-53XBR25

Chassis No. SCC-F19L-A

KP-61XBR28

Chassis No. SCC-F19Q-A

Canadian Model

KP-53XBR25

Chassis No. SCC-F23E-A

AP CHASSIS

MODELS OF THE SAME SERIES

KP-46XBR25/53XBR25/61XBR28	KP-41EXR96
KP-46V15/46V16	KPR-41EXR95
KP-53V15/53V16/61V15	KPR-46XBR15/53XBR15

SPECIFICATIONS

Structure	Screen and projector, rear projection type	Television system	American TV standards
Projection system	3 picture tubes, 3 lenses, horizontal in-line system	Channel coverage	VHF: 2-13 UHF: 14-69 CABLE TV: 1-125
Picture tube	7 inch high-brightness monochrome tubes (5.5 raster size), with optical coupling and liquid cooling system	Antenna	75- ohm external antenna terminal for VHF/UHF
Projection lenses	High performance, larger-diameter hybrid lens F 1.0	Input jacks	VIDEO IN 1, 2 and 3 S VIDEO IN (4-pin mini DIN) Y: 1 Vp-p, 75-ohms unbalanced, sync negative C: 0.286 Vp-p (Burst signal) 75-ohms
Screen material	Plastic lenticular, Plastic fresnel	Video (phono jacks):	1 Vp-p, 75-ohms unbalanced, sync negative
Projected picture size (in inches, measured diagonally)	46 (KP-46XBR25) 53 (KP-53XBR25) 61 (KP-61XBR28)	Audio (phono jacks):	500 mVrms (100% modulation)
Screen brightness (cd/m ²)	1,600 (KP-46XBR25) 1,250 (KP-53XBR25) 900 (KP-61XBR28)	Impedance:	47 kilo-ohms

- Continued on next page -

COLOR REAR VIDEO PROJECTOR
SONY[®]

Output jacks	MONITOR OUT	Speaker	KP-46XBR25/53XBR25
	S VIDEO MONITOR OUT (4-pin mini DIN) Y:1 Vp-p, 75-ohms unbalanced, sync negative		Woofer 120 mm (43/4 inches) diameter Tweeter 25 mm (1 inches) diameter
	Video (phono jacks):1Vp-p, 75-ohms unbalanced, sync negative		KP-61XBR28
	Audio (phono jacks):500mVrms (100% modulation)	Speaker output	Woofer 160 mm (61/2inches) diameter Tweeter 50 mm (2inches) diameter
	Impedance:10 kilo-ohms	CENTER SPEAKER input	20W×2 (FRONT) 10W×2 (REAR)
AUDIO (VAR) OUT		Power requirements	16Ω NORM. 30W MAX 50W
	(phono jacks)	Power consumption	120 V AC, 60 Hz
	More than 900mVrms (100% modulation) at the maximum volume setting (variable)	Dimensions (w/h/d)	350W (max.) 280W (avg.)
	Impedance:5kilo-ohms		7W (standby mode)
AUDIO OUT			1,103.9×1,289.1×511.8 mm (401/2×503/4×201/4 inches)
	(phono jacks)		(KP-46XBR25)
	900mVrms (100% modulation)		1,237.9×1,338.1×614.6 mm (483/4×523/4×241/4 inches)
	Impedance:5kilo-ohms		(KP-53XBR25)
		Weight	1,560×1,532×780 mm (617/16×605/16×3011/16 inches)
			(KP-61XBR28)
		Supplied accessories	91 kg (200 lb 10 oz) (KP-46XBR25) 94 kg (207 lb 4 oz) (KP-53XBR25) 170 kg (374 lb 13 oz) (KP-61XBR28)
			Remote Commander RM-Y114A (1) with 2 size AA (R6) EVEREADY batteries
		Optional accessories	U/V mixer EAC-66 Connecting cable RK-74A VMC-810S/820S YC-15V/30V VCR Tray SU-PJT1 (except for KP-61XBR28)

Design and specifications are subject to change without notice.

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK Δ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINT SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHASSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISE LORS DE TOUT DEPANNAGE.

LE CHASSIS DE CE RECEPTEUR EST DIRECTEMENT RACCORDE A L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MAPQUE Δ SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES remplacer que par des composants SONY dont le numero de piece est indique dans le present manuel ou dans des suppléments publiés par Sony. Les réglages de circuit dont l'importance est critique pour la sécurité du fonctionnement sont identifiés dans le présent manuel. suivre ces procédures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement est suspecté.

SAFETY CHECK-OUT (US Model Only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any).
Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

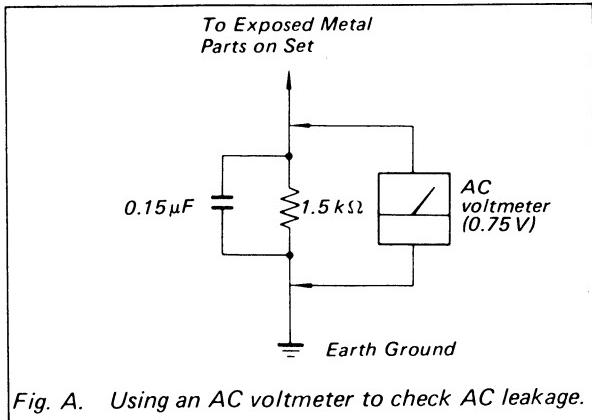


Fig. A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60–100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

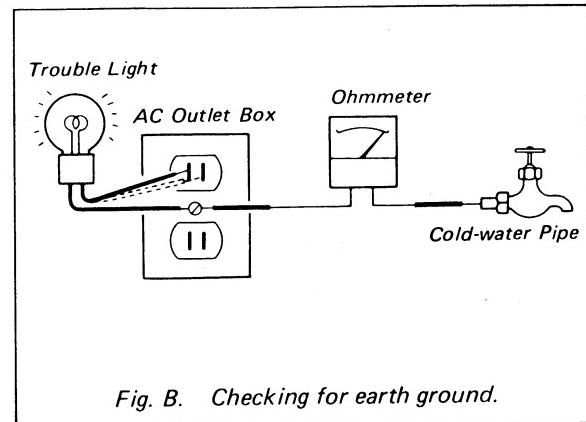


Fig. B. Checking for earth ground.

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1-9.	Using Convenient Features	17	5-2.	A Board Adjustments	66	1-10.	Selecting a Picture and Sound Mode	18	5-3.	DS Board Adjustments	69	1-11.	Watching Two or More Pictures at Once (PIP) ..	19	5-4.	P2 Board Adjustments	69	1-12.	Adjusting the Picture	22	5-5.	P3 Board Adjustments	70	1-13.	Adjusting the Sound	24	6. DIAGRAMS			1-14.	Customizing the Screen Display	27	6-1.	Block Diagram (1)	72	1-15.	Using Time-Activated Functions	29	6-2.	Block Diagram (2)	75	1-16.	Setting FAVORITE CHANNEL	33	6-3.	Block Diagram (3)	80	1-17.	Using the Programmable Remoto Commander ..	34	6-4.	Frame Schematic Diagram	85	1-18.	Troubleshooting	38	6-5.	Circuit Boards Location	89	2. DISASSEMBLY						2-1.	H2 Board Removal (KP-46XBR25/53XBR25 (US/CND) only)	39	6-6.	Schematic Diagrams and Printed Wiring Boards (1) Schematic Diagrams of G, H1, H2, and DS Boards	90	2-2.	H1 Board Removal (KP-46XBR25/53XBR25 (US/CND) only)	39	6-7.	(2) Schematic Diagram of A Board	99	2-3-1.	H1 and H2 Boards Removal (KP-61XBR28 only)	40	6-8.	(3) Schematic Diagrams of U, UT Boards	103	2-3-2.	Screen Frame Removal (KP-61XBR28 only)	40	6-9.	(4) Schematic Diagrams of E1, E2 Boards	111	2-4.	D Board Removal	41	6-10.	(5) Schematic Diagram of D Board	115	2-5.	Back Cover Removal	41	6-11.	(6) Schematic Diagrams of M, N Boards	123	2-6.	YA Board Removal	42	6-12.	(7) Schematic Diagram of X3 Board	127	2-7.	Main Chassis Assy Removal	42	6-13.	(8) Schematic Diagram of Y2 Board	131	2-8.	Service Positon	43	6-14.	(9) Schematic Diagram of P4 Board	134	2-9.	P3 Board Removal	45	6-15.	(10) Schematic Diagram of YA Board	137	2-10.	Main Connector Panel Removal	45	6-16.	(11) Schematic Diagram of YG Board	139	2-11.	U and P4 Boards Removal	46	6-17.	(12) Schematic Diagrams of S, V Boards	141	2-12.	V Board Removal	46	6-18.	(13) Schematic Diagram of P2 Board	144	2-13.	N Bracket Removal	47	6-19.	(14) Schematic Diagram of P3 Board	147	2-14.	G Board Removal	47	6-20.	(15) Schematic Diagrams of CB, CG, CR, ZB, ZG and ZR Boards	150	2-15-1.	Connector Cable	48	6-21.	Semiconductors	156	2-15-2.	Connector Cable	48	7. EXPLODED VIEWS			2-16.	Chassis Assy Removal	49	7-1-1.	Screen Frame and Control Panel (KP-46XBR25/53XBR25 (US/CND))	159	2-17.	Picture Tube Removal	49	7-1-2.	Screen Frame and Control Panel (KP-61XBR28)	160	2-18.	High-Voltage Cable Installation and Removal ..	50	7-2.	Cabinet	161	3. SET-UP ADJUSTMENTS						3-1.	Focus Lens Adjustments	51	7-3.	Chassis	162	3-2.	Deflection Yoke Position Adjustments	51	7-4.	Picture Tube	163	3-3.	2-Pole Magnet Adjustment	52	8. ELECTRICAL PARTS LIST			3-4.	4-Pole Magnet Adjustment	52	3-5.	De-Focus Adjustment (Blue)	52	164	3-6.	Green Picture Adjustments	52																		
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1-11.	Watching Two or More Pictures at Once (PIP) ..	19	5-4.	P2 Board Adjustments	69	1-12.	Adjusting the Picture	22	5-5.	P3 Board Adjustments	70	1-13.	Adjusting the Sound	24	6. DIAGRAMS			1-14.	Customizing the Screen Display	27	6-1.	Block Diagram (1)	72	1-15.	Using Time-Activated Functions	29	6-2.	Block Diagram (2)	75	1-16.	Setting FAVORITE CHANNEL	33	6-3.	Block Diagram (3)	80	1-17.	Using the Programmable Remoto Commander ..	34	6-4.	Frame Schematic Diagram	85	1-18.	Troubleshooting	38	6-5.	Circuit Boards Location	89	2. DISASSEMBLY						2-1.	H2 Board Removal (KP-46XBR25/53XBR25 (US/CND) only)	39	6-6.	Schematic Diagrams and Printed Wiring Boards (1) Schematic Diagrams of G, H1, H2, and DS Boards	90	2-2.	H1 Board Removal (KP-46XBR25/53XBR25 (US/CND) only)	39	6-7.	(2) Schematic Diagram of A Board	99	2-3-1.	H1 and H2 Boards Removal (KP-61XBR28 only)	40	6-8.	(3) Schematic Diagrams of U, UT Boards	103	2-3-2.	Screen Frame Removal (KP-61XBR28 only)	40	6-9.	(4) Schematic Diagrams of E1, E2 Boards	111	2-4.	D Board Removal	41	6-10.	(5) Schematic Diagram of D Board	115	2-5.	Back Cover Removal	41	6-11.	(6) Schematic Diagrams of M, N Boards	123	2-6.	YA Board Removal	42	6-12.	(7) Schematic Diagram of X3 Board	127	2-7.	Main Chassis Assy Removal	42	6-13.	(8) Schematic Diagram of Y2 Board	131	2-8.	Service Positon	43	6-14.	(9) Schematic Diagram of P4 Board	134	2-9.	P3 Board Removal	45	6-15.	(10) Schematic Diagram of YA Board	137	2-10.	Main Connector Panel Removal	45	6-16.	(11) Schematic Diagram of YG Board	139	2-11.	U and P4 Boards Removal	46	6-17.	(12) Schematic Diagrams of S, V Boards	141	2-12.	V Board Removal	46	6-18.	(13) Schematic Diagram of P2 Board	144	2-13.	N Bracket Removal	47	6-19.	(14) Schematic Diagram of P3 Board	147	2-14.	G Board Removal	47	6-20.	(15) Schematic Diagrams of CB, CG, CR, ZB, ZG and ZR Boards	150	2-15-1.	Connector Cable	48	6-21.	Semiconductors	156	2-15-2.	Connector Cable	48	7. EXPLODED VIEWS			2-16.	Chassis Assy Removal	49	7-1-1.	Screen Frame and Control Panel (KP-46XBR25/53XBR25 (US/CND))	159	2-17.	Picture Tube Removal	49	7-1-2.	Screen Frame and Control Panel (KP-61XBR28)	160	2-18.	High-Voltage Cable Installation and Removal ..	50	7-2.	Cabinet	161	3. SET-UP ADJUSTMENTS						3-1.	Focus Lens Adjustments	51	7-3.	Chassis	162	3-2.	Deflection Yoke Position Adjustments	51	7-4.	Picture Tube	163	3-3.	2-Pole Magnet Adjustment	52	8. ELECTRICAL PARTS LIST			3-4.	4-Pole Magnet Adjustment	52	3-5.	De-Focus Adjustment (Blue)	52	164	3-6.	Green Picture Adjustments	52																														
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1-16.	Setting FAVORITE CHANNEL	33	6-3.	Block Diagram (3)	80	1-17.	Using the Programmable Remoto Commander ..	34	6-4.	Frame Schematic Diagram	85	1-18.	Troubleshooting	38	6-5.	Circuit Boards Location	89	2. DISASSEMBLY						2-1.	H2 Board Removal (KP-46XBR25/53XBR25 (US/CND) only)	39	6-6.	Schematic Diagrams and Printed Wiring Boards (1) Schematic Diagrams of G, H1, H2, and DS Boards	90	2-2.	H1 Board Removal (KP-46XBR25/53XBR25 (US/CND) only)	39	6-7.	(2) Schematic Diagram of A Board	99	2-3-1.	H1 and H2 Boards Removal (KP-61XBR28 only)	40	6-8.	(3) Schematic Diagrams of U, UT Boards	103	2-3-2.	Screen Frame Removal (KP-61XBR28 only)	40	6-9.	(4) Schematic Diagrams of E1, E2 Boards	111	2-4.	D Board Removal	41	6-10.	(5) Schematic Diagram of D Board	115	2-5.	Back Cover Removal	41	6-11.	(6) Schematic Diagrams of M, N Boards	123	2-6.	YA Board Removal	42	6-12.	(7) Schematic Diagram of X3 Board	127	2-7.	Main Chassis Assy Removal	42	6-13.	(8) Schematic Diagram of Y2 Board	131	2-8.	Service Positon	43	6-14.	(9) Schematic Diagram of P4 Board	134	2-9.	P3 Board Removal	45	6-15.	(10) Schematic Diagram of YA Board	137	2-10.	Main Connector Panel Removal	45	6-16.	(11) Schematic Diagram of YG Board	139	2-11.	U and P4 Boards Removal	46	6-17.	(12) Schematic Diagrams of S, V Boards	141	2-12.	V Board Removal	46	6-18.	(13) Schematic Diagram of P2 Board	144	2-13.	N Bracket Removal	47	6-19.	(14) Schematic Diagram of P3 Board	147	2-14.	G Board Removal	47	6-20.	(15) Schematic Diagrams of CB, CG, CR, ZB, ZG and ZR Boards	150	2-15-1.	Connector Cable	48	6-21.	Semiconductors	156	2-15-2.	Connector Cable	48	7. EXPLODED VIEWS			2-16.	Chassis Assy Removal	49	7-1-1.	Screen Frame and Control Panel (KP-46XBR25/53XBR25 (US/CND))	159	2-17.	Picture Tube Removal	49	7-1-2.	Screen Frame and Control Panel (KP-61XBR28)	160	2-18.	High-Voltage Cable Installation and Removal ..	50	7-2.	Cabinet	161	3. SET-UP ADJUSTMENTS						3-1.	Focus Lens Adjustments	51	7-3.	Chassis	162	3-2.	Deflection Yoke Position Adjustments	51	7-4.	Picture Tube	163	3-3.	2-Pole Magnet Adjustment	52	8. ELECTRICAL PARTS LIST			3-4.	4-Pole Magnet Adjustment	52	3-5.	De-Focus Adjustment (Blue)	52	164	3-6.	Green Picture Adjustments	52																																																												
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SECTION 1

GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

1-1. UNPACKING AND VIEWING AREA

- 1** Carefully follow the instructions on the outside of the packing carton to unpack the projection TV.

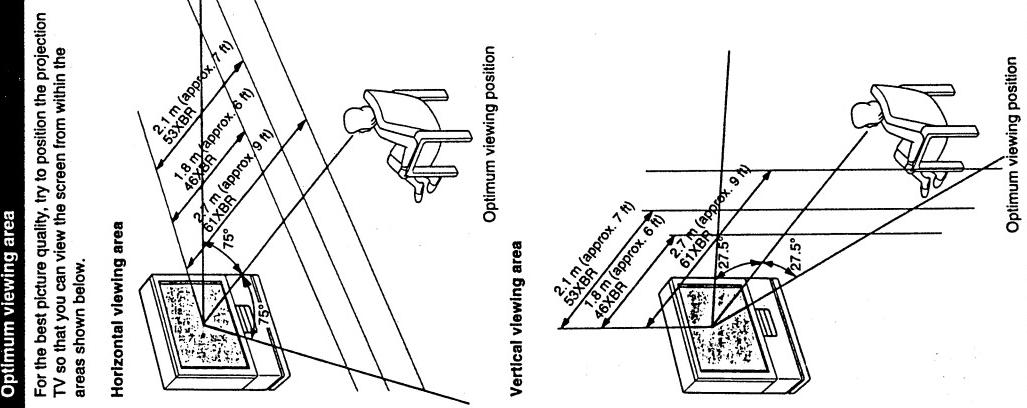
Notes

- The supplied accessories are packed in the bottom of the carton. Be sure not to throw them away.
- Keep the original carton and packing materials to safely transport the projection TV in the future.

- 2** Check to make sure that the following is included:

Universal Remote Commander RM-Y114A (1)
with 2 size AA (R6) EVEREADY batteries

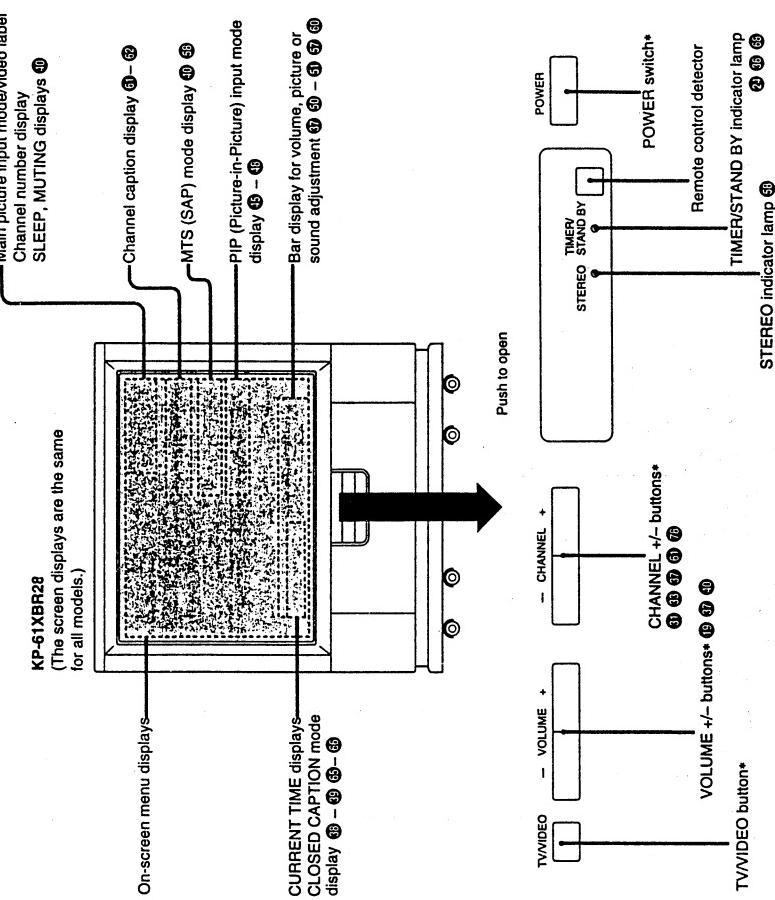
If the Remote Commander is missing, contact your dealer.



1-2. LOCATING CONTROLS AND CONNECTORS

For details, see the pages indicated by the numbered black circles.

Front



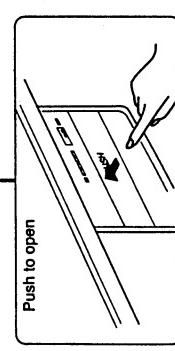
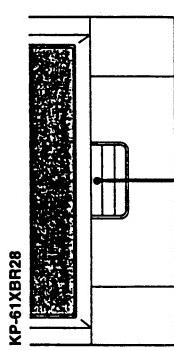
- 3** Place the projection TV in a cool, dry place where the ventilation openings at the sides are not blocked.

- 4** Plug the projection TV power cord into an AC 120 volt power outlet.

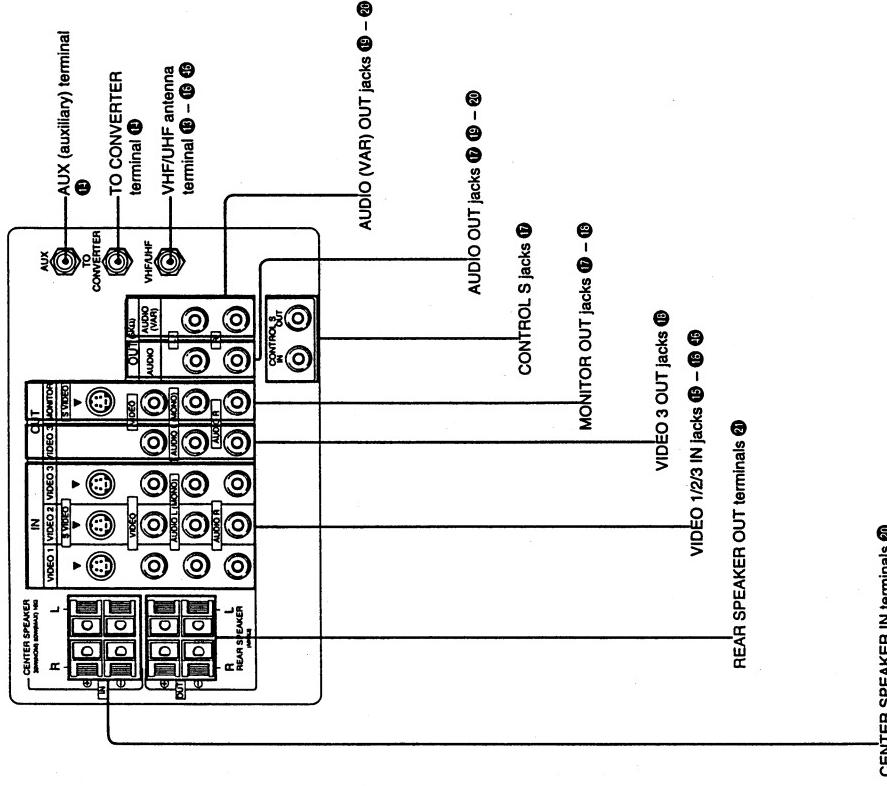
For further precautions, see p. 2.

* Buttons with the same function are also located on the Remote Commander (p. 10).

Front Inner panel



Rear



CENTER SPEAKER IN terminals ⑳

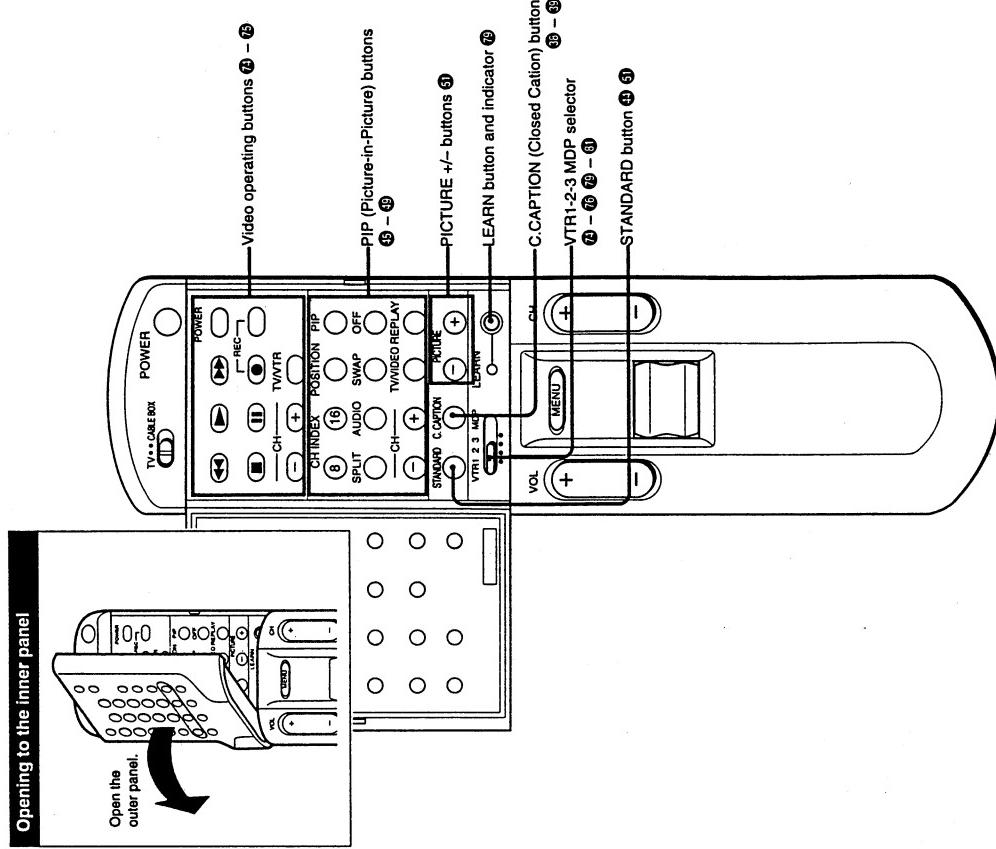
- Buttons with the same function are also located on the Remote Commander (p. 10).

Note
The instructions in this manual are based for the most part on operating the projection TV with the Remote Commander. You can also use the buttons on the projection TV that have the same function.

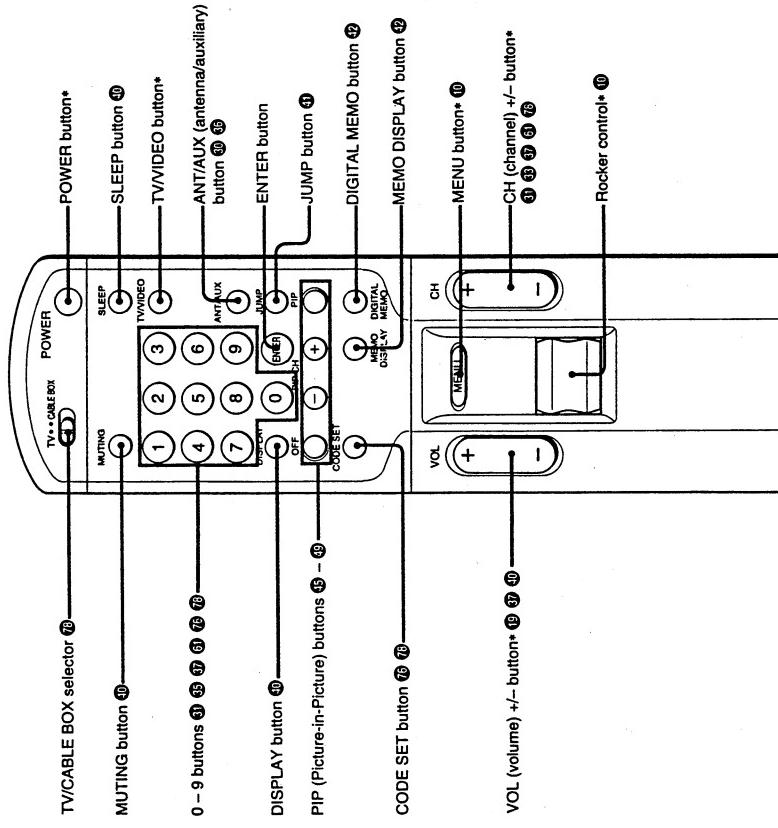
The following are controls that are of different types, but have exactly the same function.

Projection TV	A/V window ▲ + ▼ - buttons	RETURN button
Remote Commander	Rocker control (press up or down)	Rocker control (click)

Remote Commander RM-Y114A (Inner panel controls)

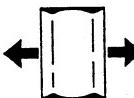


Remote Commander RM-Y114A (Outer panel controls)

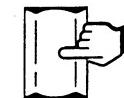
**Using the rocker control**

Use the rocker control to make on-screen menu selections (see p. 22).

Press the control up or down to make a selection.



Click the control to execute the selection.



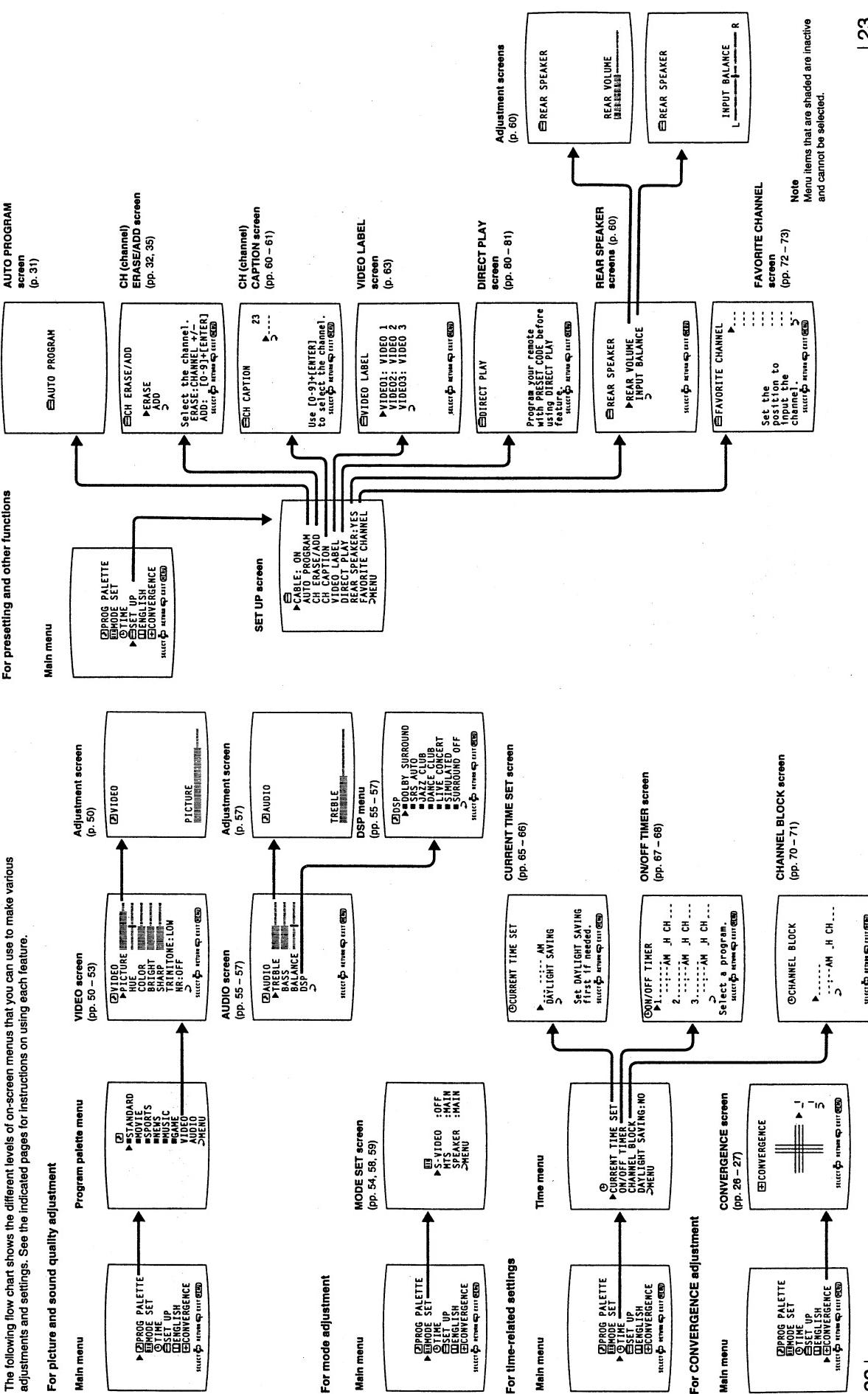
- Buttons with the same function are also located on the projection TV (pp. 7 – 8).

Note

If the TV/CABLE BOX selector is set to CABLE BOX, the Remote Commander is able to control a connected cable box, not the projection TV (p. 74). Set the selector to TV to control the projection TV with the Remote Commander.

1-3. USING THE ON-SCREEN MENUS

The following flow chart shows the different levels of on-screen menus that you can use to make various adjustments and settings. See the indicated pages for instructions on using each feature.



Navigating through the menus

To display the main menu
Press MENU.

To return to the previous menu
Press the rocker control up or down until the cursor points to "► MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

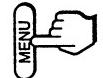
Changing the menu language

The menu language is factory-set to ENGLISH. Follow these instructions to change the menu language to Spanish or French, or back to English.

1 Press POWER to turn on the projection TV.
TIMER/STAND BY indicator blinks until the picture appears.



2 Press MENU.
The main menu appears.



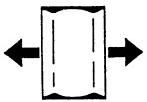
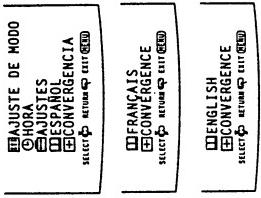
3 Press the rocker control up or down until the cursor points to "ENGLISH."
Then click the rocker control.
The language display turns red.



4 Press the rocker control up or down to select the language.
Each time you press the rocker control up or down, the "ESPAÑOL," "FRANÇAIS" and "ENGLISH" menus appear.

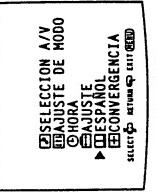
To return to the normal screen.
Press MENU on the Remote Commander.

- Notes concerning menus**
- During PIP (Picture-in-Picture) mode, the on-screen menus may overlap the window picture.
 - The menus disappear automatically, if you do not press a button within 90 seconds.

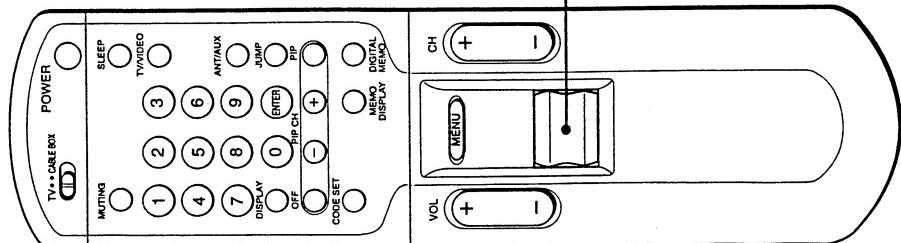


Note
Certain parts of the "ESPAÑOL" and "FRANÇAIS" menus remain in English.

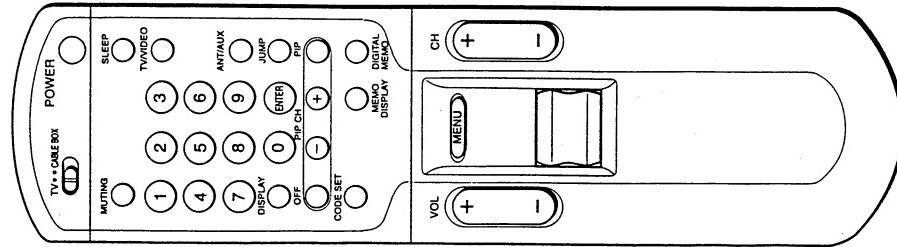
5 Click the rocker control.
The language is selected.



Spanish menu



1-4. ADJUSTING COLOR REGISTRATION (CONVERGENCE)



In a projection TV, the projection tube image appears on the screen in three color layers (red, green and blue). If these layers are not in proper registration, the color is poor and the picture blurs. To correct this, perform the CONVERGENCE adjustment.

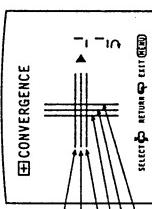
1 Press MENU.
The main menu appears.



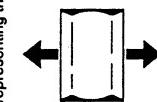
2 Press the rocker control up or down until the cursor points to "CONVERGENCE."



3 Click the rocker control.
The CONVERGENCE screen and the colored adjustment lines appear.

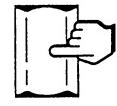


4 Press the rocker control up or down until the cursor points to the symbol representing the line you want to adjust (see the key below).

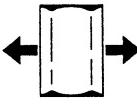


Adjustment line symbols' key
| (red vertical; left/right adjustment)
— (red horizontal; up/down adjustment)
| (blue vertical; left/right adjustment)
— (blue horizontal; up/down adjustment)

5 Click the rocker control.
The adjustment line is selected.



6 Press the rocker control up or down until the line converges with the center green line. Then click the rocker control.



To move up
To move right
To move down
To move left

Press the rocker control up.
Press the rocker control down.

7 Repeat steps 4 - 6 to adjust the other lines, until all the lines have overlapped to form a white cross.

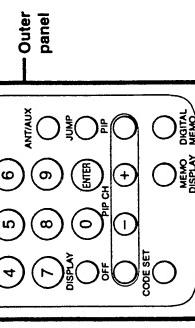


1-5. SETTING CABLE ON OR OFF

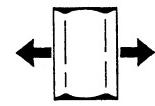
If you have cable connected to the projection TV, follow the steps below to set the cable connection on or off. Set CABLE OFF to preset or watch VHF or UHF channels, and set CABLE ON to preset or watch cable TV channels.

Note
If the projection TV is in video mode, the "CABLE" display is shaded and cannot be selected. Press TV/VIDEO to change to TV mode.

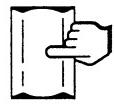
1 Press MENU.
The main menu appears.



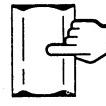
2 Press the rocker control up or down until the cursor points to "SET UP".



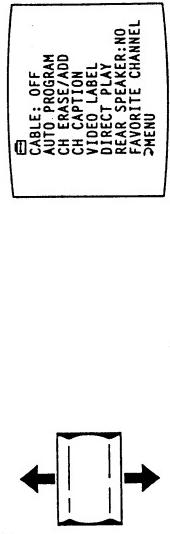
3 Click the rocker control.
The set up menu appears, and the cursor points to "CABLE."



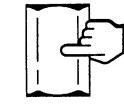
4 Click the rocker control again.
The mode display turns red.



5 Press the rocker control up or down to select "ON" or "OFF".



6 Click the rocker control.
The setting is complete.



To return to the previous menu
Press the rocker control up or down until the cursor points to "MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.
To return to the normal screen.
Press MENU on the Remote Commander.

Cable TV channel chart*

Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

Number on this projection TV	Corresponding CATV channel
1	A-8
5	A-7
6	A-6
14	A
15	B
16	C
17	D
18	E
19	F
20	G
21	H
22	I
23	J
24	K
25	L
26	M
27	N
28	O
29	P
30	Q
31	R
32	S
33	T
34	U
35	V
36	W
37	W+1
38	W+2
39	W+3
•	•
93	W+57
94	W+58
95	A-5
96	A-4
97	A-3
98	A-2
99	A-1
100	W+59
101	W+60
102	W+61
•	•
123	W+82
124	W+83
125	W+84

Check with your local cable TV company for more complete information on the available channels.
• The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

1-6. PRESETTING TV CHANNELS

By presetting TV channels to the projection TV, you can select channels by pressing CH (CHANNEL) +/-.
(You can select VHF channels 2 – 13 without presetting.)

Presetting all receivable channels automatically

Follow these instructions to preset all the receivable VHF, UHF or cable TV channels to the projection TV.

Notes

- If the projection TV is in video mode, the "AUTO PROGRAM" display is shaded and cannot be selected. Press TV/VIDEO to change to TV mode.
- Perform auto programming during the day rather than late at night, when some channels may not be broadcasting.

1 Set the cable connection on or off (pp. 28 – 29) to select the type of channel you want to preset, VHF/UHF or cable TV.

To preset cable TV channels

2 Press ANT/AUX to select the type of channel you want to preset, VHF/UHF/regular cable TV, or pay cable TV connected to the AUX (auxiliary) terminal.

To preset VHF, UHF or regular cable TV channels

3 Press MENU.

The main menu appears.

4

Click the rocker control.

The set up menu appears.

5 Press the rocker control up or down until the cursor points to "PROGRAM".

Press MENU on the Remote Commander.

6 Press the rocker control up or down until the cursor points to "AUTO PROGRAM".

Press CH +/- to check or view the preset channels.

7 Click the rocker control.

The set up menu appears.

8 Press the rocker control up or down until the cursor points to "SET UP".

Press MENU on the Remote Commander.

9 Press the rocker control up or down until the cursor points to "SET UP".

Press MENU on the Remote Commander.

10 Press the rocker control up or down until the cursor points to "SET UP".

Press MENU on the Remote Commander.

11 Press the rocker control up or down until the cursor points to "SET UP".

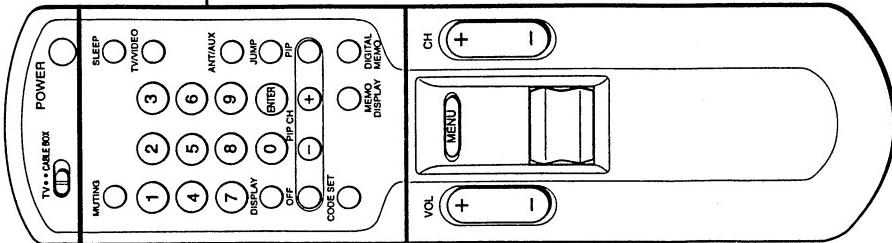
Press MENU on the Remote Commander.

12 Press the rocker control up or down until the cursor points to "SET UP".

Press MENU on the Remote Commander.

13 Press the rocker control up or down until the cursor points to "SET UP".

Press MENU on the Remote Commander.



To select TV channels without presetting
Press the 0 – 9 buttons and ENTER.

To return to the previous menu
Press the rocker control up or down until the cursor points to "MENU". Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

"AUTO PROGRAM" appears on the screen and receivable channels (other than the channels already preset) are preset in numerical sequence. The channels previously preset will not remain in the projection TV's memory. When no more channels are found, auto programming stops and the screen returns automatically to the set up menu.

Receivable channels for this projection TV
VHF: 2 – 13
UHF: 14 – 69
Cable: 1 – 125

Adding TV channels

Follow these instructions to add TV channels one by one to the selection memory, or to replace a TV channel you previously erased (p. 32 – 33).

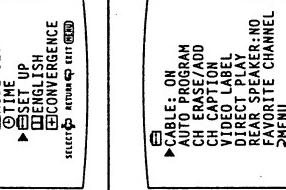
1 Press MENU.
The main menu appears.



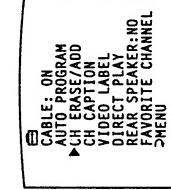
2 Press the rocker control up or down until the cursor points to "SET UP".



3 Click the rocker control.
The set up menu appears.



4 Press the rocker control up or down until the cursor points to "CH ERASE/ADD".



5 Click the rocker control.

The CH ERASE/ADD screen appears.



To add another channel
Repeat steps 7 – 8.

To return to the previous menu
Press the rocker control up or down until the cursor points to "MENU". Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

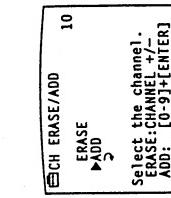
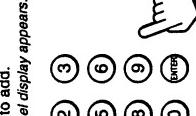
To return to the normal screen
Press MENU on the Remote Commander.

Note
If you add a VHF or UHF channel, the same number cable TV channel is also added (and vice versa).

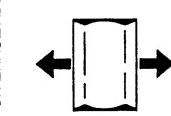
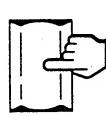
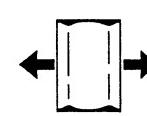
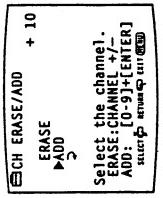
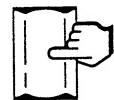
6 Press the rocker control down until the cursor points to "ADD".



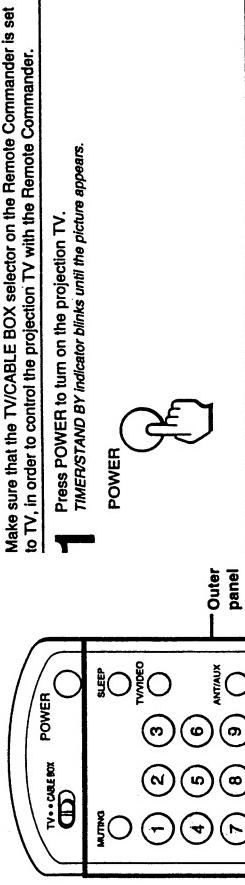
7 Press 0 – 9 and ENTER on the Remote Commander to select the channel you want to add.



8 Click the rocker control.
A "+" sign appears in front of the channel number display, indicating that the channel is added; then the CH ERASE/ADD screen automatically reappears.

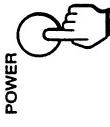


1-7. WATCHING TV PROGRAMS

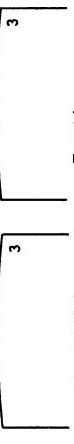


Make sure that the TV/CABLE BOX selector on the Remote Commander is set to TV, in order to control the projection TV with the Remote Commander.

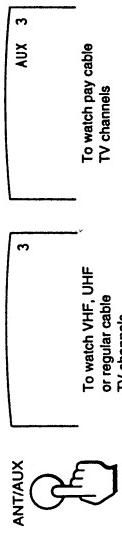
1 Press POWER to turn on the projection TV.
TIME/STAND BY indicator blinks until the picture appears.



2 Set the cable connection on or off (pp. 28 - 29) to select the type of channel you want to watch, VHF/UHF or cable TV.



To watch VHF or UHF channels
Press ANT/AUX to select the type of channel you want to watch, VHF/UHF/regular cable TV, or pay cable TV connected to the AUX (auxiliary) terminal.



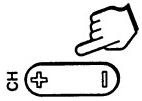
To watch pay cable TV channels



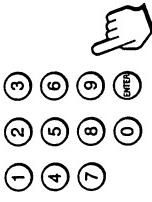
To watch cable TV channels

3 Select a channel in one of the following two ways:

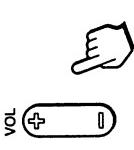
To scan the preset channels in numerical sequence, press CH +/-.
For example, to select channel 10, press 1, 0 and ENTER.



To select a channel directly, press 0 - 9 and then ENTER.



4 Press VOL +/- to adjust the volume.

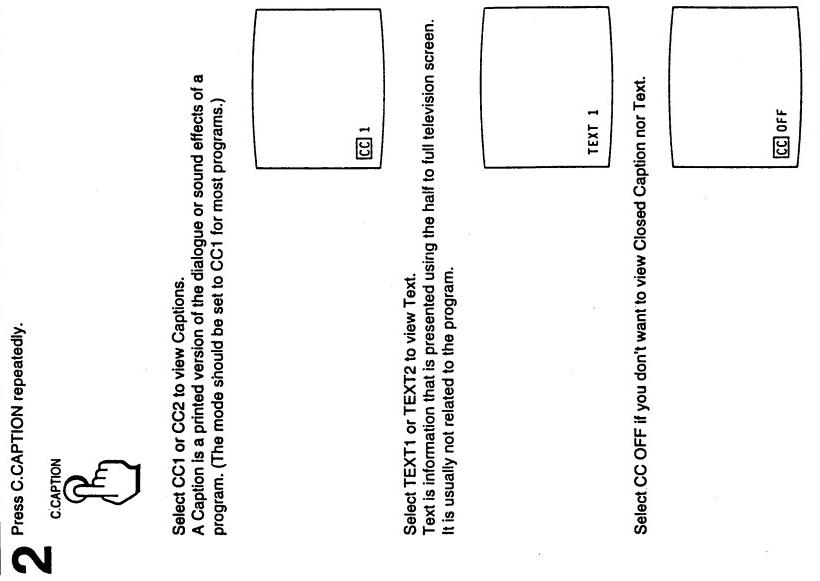
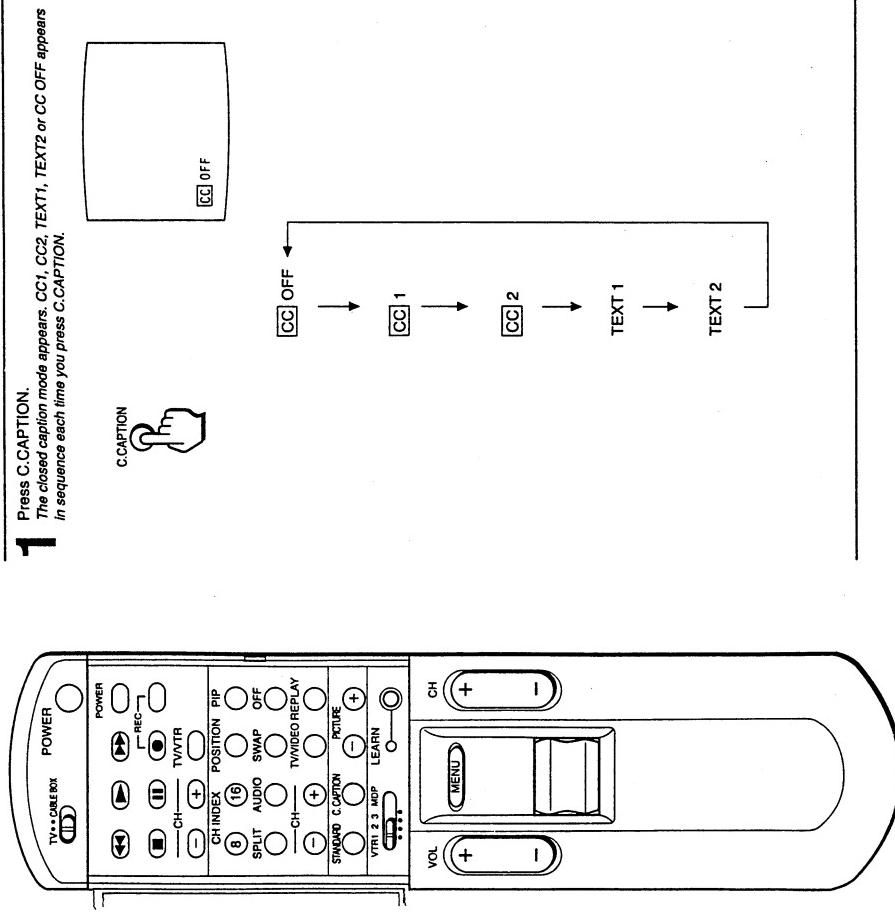


Press + to increase the volume.
Press - to decrease the volume.

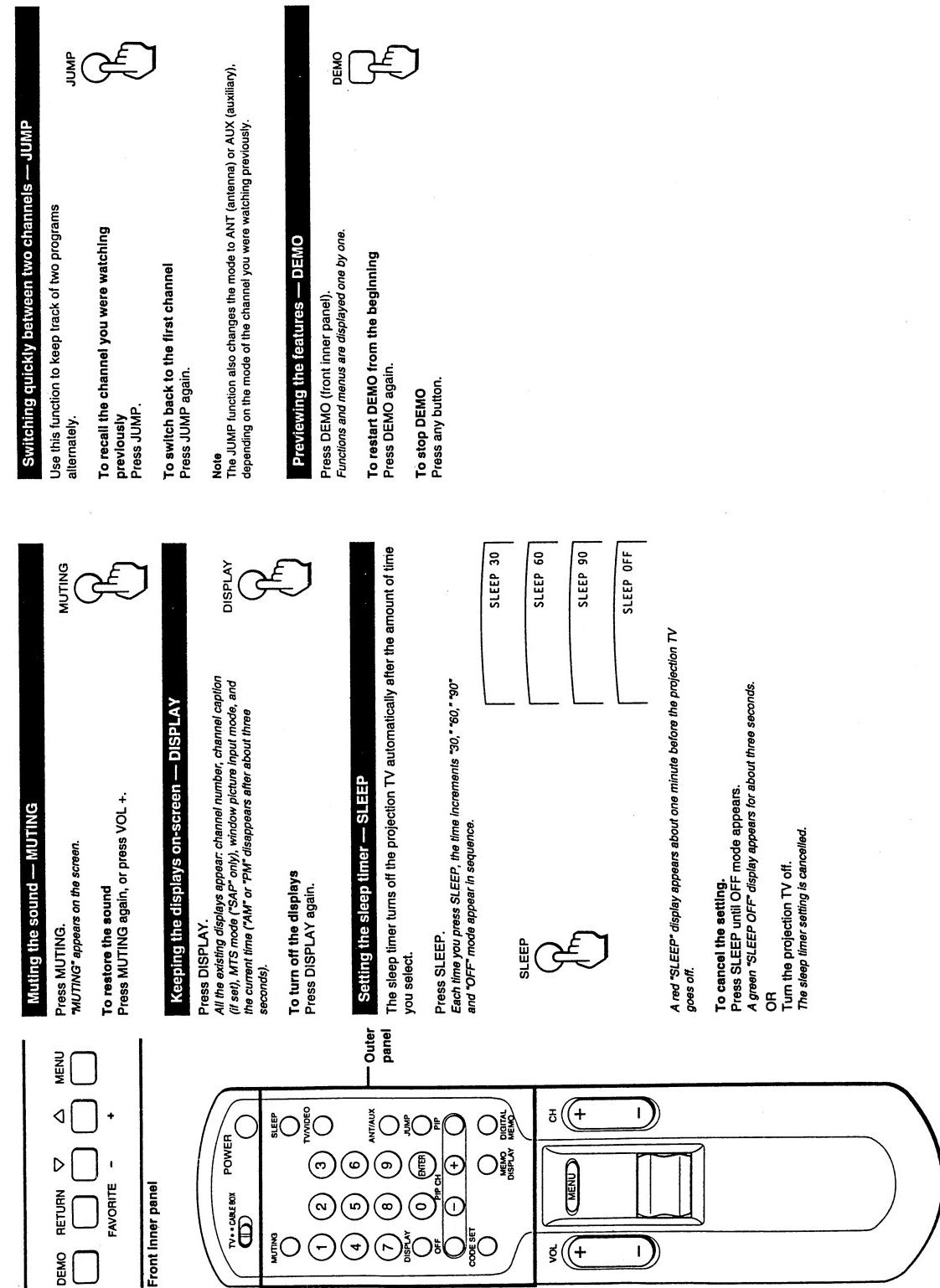
If VIDEO 1, VIDEO 2 or VIDEO 3 appears on the screen
Press TV/VIDEO until a TV channel number appears.

To select channels more easily
Set FAVORITE CHANNEL (pp. 72 - 73).
To turn off the projection TV
Press POWER.

1-8. USING CLOSED CAPTION



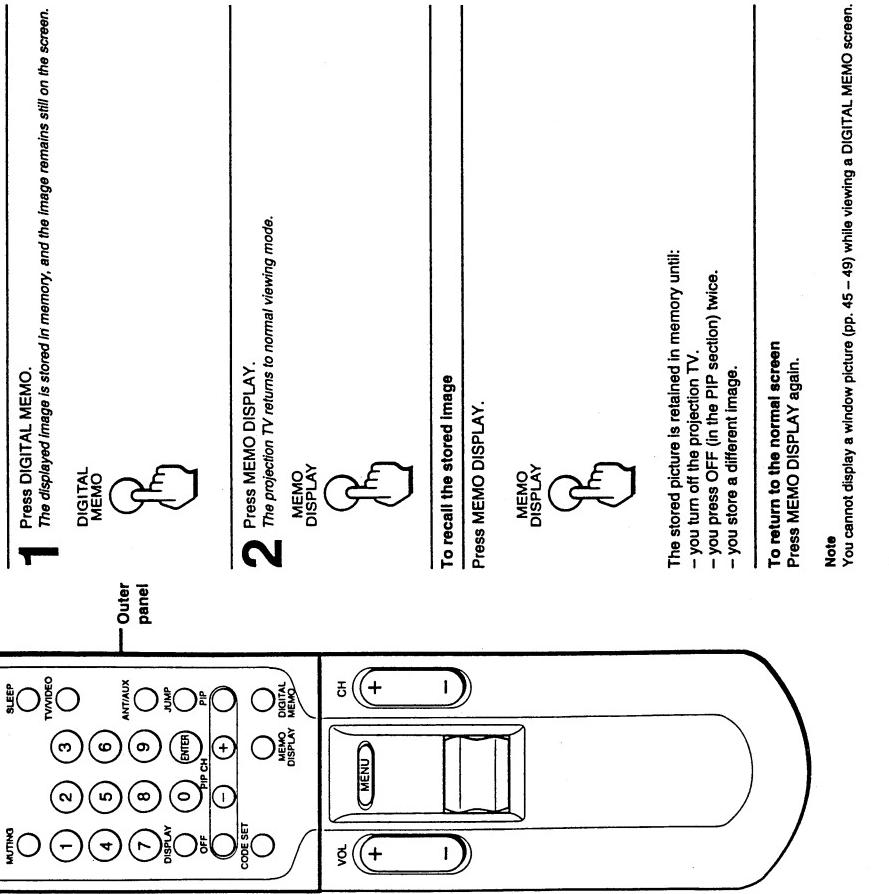
1-9. USING CONVENIENT FEATURES



1-10. SELECTING A PICTURE AND SOUND MODE

This projection TV features six modes (STANDARD, MOVIE, SPORTS, NEWS, MUSIC, GAME) that offer different picture and sound qualities. Choose the one that best suits the type of program that you want to watch.

Example: Select MOVIE mode for picture and sound that gives you the sense of being in a movie theater.



The stored picture is retained in memory until:

- you turn off the projection TV.
- you press OFF (in the PIP section) twice.
- you store a different image.

To return to the normal screen
Press MEMO DISPLAY again.

Note
You cannot display a window picture (pp. 45 - 49) while viewing a DIGITAL MEMO screen.

To select a different mode
Repeat steps 3 - 4.

1-11. WATCHING TWO OR MORE PICTURES AT ONCE (PIP)

Selecting standard mode (without using the menus)

Follow these instructions to select standard mode without using the on-screen menus.

Press STANDARD.



To return to the previous menu

Press the rocker control up or down until the cursor points to "2 MENU". Then click the rocker control.

To return to the main menu

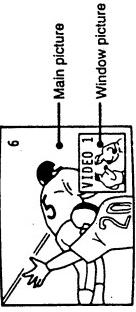
Repeat the above, until you reach the main menu.

To return to the normal screen.

Press MENU on the Remote Commander.

You can watch both the main picture and one or more window pictures simultaneously, using the Picture-in-Picture (PIP) function.

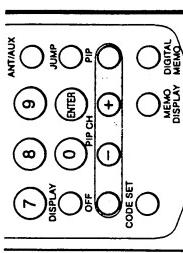
To turn PIP mode on or off, or to change TV channels, you can use the PIP buttons on the Remote Commander's outer panel. For other PIP functions, use the inner panel controls, which also include the PIP, OFF and CH +/- buttons.



Displaying a window picture

To turn PIP mode on or off, or to change TV channels, you can use the PIP buttons on the Remote Commander's outer panel. For other PIP functions, use the inner panel controls, which also include the PIP, OFF and CH +/- buttons.

Remote Commander (Outer panel)



Press PIP to display a window picture

Input source mode or TV channel for the main picture

Input source mode or TV channel for the window picture

PIP

Press PIP to display a window picture

Input source mode or TV channel for the main picture

Input source mode or TV channel for the window picture

PIP

A window picture appears in the last mode you watched.
Each time you press PIP, a 1/4 or 1/9 size window picture appears alternately.

To turn PIP function off
Press OFF.
The window picture disappears.

To change TV channels in the window picture
Press TV/VIDEO to select TV mode; then press CH +/- in the PIP control area.

Notes

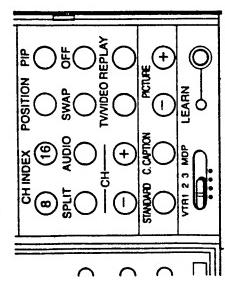
- You can also use the CH +/- buttons on the Remote Commander's inner panel.
- The video label and channel caption will not appear with the window picture even if you have set them.
- If you select a blocked channel in the window picture, the display "BLOCKED" appears with the window picture. (See "Setting CHANNEL BLOCK" pp. 70 - 71.)
- If you display a DIGITAL MEMO screen (p. 42), the window picture disappears.

Leaving a fixed pattern on the screen for long periods of time, when operating a video game or personal computer, may damage the picture tube. To avoid this, keep the picture contrast and the brightness levels low (PICTURE and BRIGHT adjustment, pp. 50 - 51).

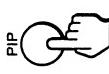
Changing the window picture input mode

Follow these instructions to select the input mode (TV/VIDEO 1, VIDEO 2, VIDEO 3) for the window picture.

Remote Commander (inner panel)

**1 Press PIP to select the input mode.**

Each time you press PIP, "VIDEO 1", "VIDEO 2" and "VIDEO 3" appear in sequence.

**2 To receive the window picture sound**

Press AUDIO.

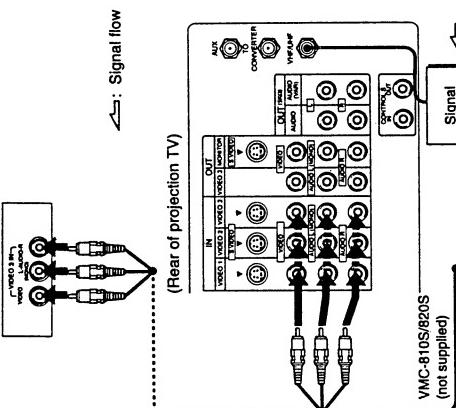
The display appears for a few seconds, indicating that the window picture sound is being received.
To restore the main picture sound
Press AUDIO again.

Note
The window picture sound is also output from the AUDIO (VAR) OUT jacks. The AUDIO OUT and MONITOR OUT jacks output the main picture sound only.

Displaying CATV input as a window picture

To use Picture-in-Picture with pay cable TV input, make the connections to your cable converter box as shown below.

(Front inner panel)

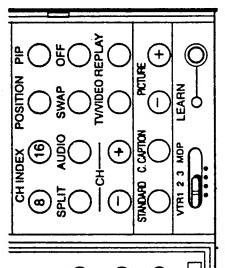
**2 Press TV/VIDEO to select the input mode.**

Each time you press TV/VIDEO, "VIDEO 1", "VIDEO 2" and "VIDEO 3" appear in sequence.

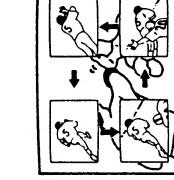
**Changing the position of the window picture**

Follow these instructions to change the position of the window picture on the screen.

Remote Commander (inner panel)

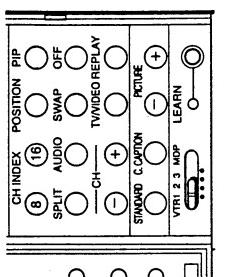
**1 Press PIP to display a window picture.**

VIDEO 1

**2 Press POSITION.****Swapping the main and window pictures**

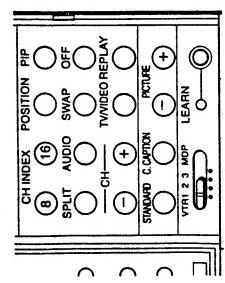
Follow these instructions to swap the input signals of the main and window pictures.

Remote Commander (inner panel)

**1 Press PIP to display a window picture.****2 Press SWAP.****Displaying the main and window pictures simultaneously**

Follow these instructions to select the input mode (TV/VIDEO 1, VIDEO 2, VIDEO 3) for the window picture.

Remote Commander (inner panel)

**1 Press PIP to select the input mode.****2 Press TV/VIDEO to select the input mode.**

Each time you press TV/VIDEO, "VIDEO 1", "VIDEO 2" and "VIDEO 3" appear in sequence.

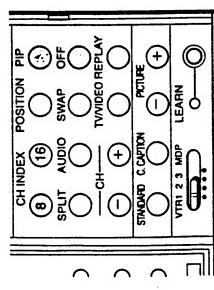
**1-2 Follow steps 1-2 in "Changing the window picture input mode" on this page to select the video input mode for your connected VCR.****3 Put your VCR on an inactive channel (channel 3 or 4).****4 Change pay cable TV channels with the supplied Remote Commander**

To control your cable converter box with the supplied Remote Commander
See p. 78.

Displaying 8 TV channels at once – CH INDEX 8

Follow these instructions to display the main picture and 7 window pictures at once.

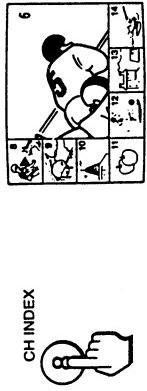
Remote Commander (Inner panel)



- 1** Press PIP to display a window picture.



- 2** Press CH INDEX 8 to display seven window pictures.
Seven TV channels appear in numerical sequence, as window pictures.



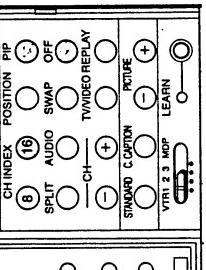
Each time you press CH INDEX 8, the next seven sequential channels appear (the main picture does not change).

- To return to the normal screen**
Press OFF.

Displaying 16 TV channels at once – CH INDEX 16

Follow these instructions to display 16 window pictures at once.

Remote Commander (Inner panel)



- 1** Press PIP to display a window picture.



- 2** Press CH INDEX 16 to display 16 window pictures.
16 TV channels appear in numerical sequence, as window pictures.



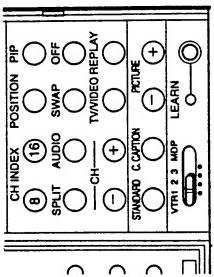
Each time you press CH INDEX 16, the next 16 sequential channels appear (the main picture does not change).

- To return to the normal screen**
Press OFF.

Replaying the main picture as a window picture

Follow these instructions to replay the image that appeared in the main picture two seconds before, as a window picture.

Remote Commander (inner panel)



- Press REPLAY.**



- To return to the normal screen**
Press OFF.

Note
When using SPLIT, vertical lines may appear elongated.



- Press SPLIT.**
- Window picture Main picture

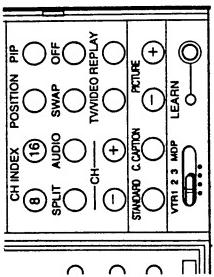
To return to the normal screen
Press OFF.

Press OFF.

Splitting the screen

Follow these instructions to split the screen, with the window picture on the left, and the main picture on the right.

Remote Commander (inner panel)



- Press SPLIT.**



- Window picture Main picture**

To return to the normal screen
Press OFF.

Press OFF.

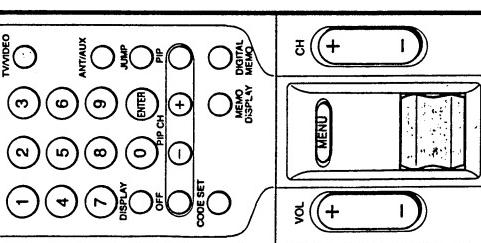
1-12. ADJUSTING THE PICTURE

You can adjust the picture (and sound, pp. 57 – 58) for each Input mode (TV, VIDEO 1, VIDEO 2, VIDEO 3) by pressing TV/VIDEO on the projection TV or on the Remote Commander to select the input mode, before making the adjustments. These adjustments are retained in memory even when you turn off the projection TV, but are cancelled after you change the adjustments, or select a picture and sound mode (pp. 43 – 44).

Adjusting picture quality

Follow the use instructions to adjust PICTURE, HUE, COLOR, BRIGHT (brightness) and SHARP (sharpness).

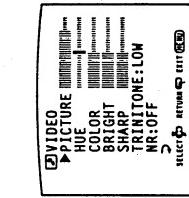
Remote Commander (Outer panel)



- 2** Click the rocker control.
The program palette menu appears.



- 3** Press the rocker control up or down until the cursor points to "VIDEO".

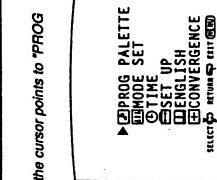
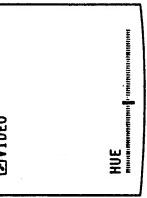


- 4** Click the rocker control.
The VIDEO screen appears.

- 5** Press the rocker control up or down until the cursor points to the item you want to adjust.



- 6** Click the rocker control.
The adjustment screen appears.



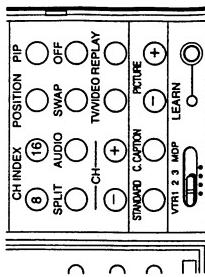
- 1** Press MENU.
The main menu appears, and the cursor points to "PROG PALETTE".

- 7** Press the rocker control up or down to make the adjustment.

To adjust other items
Repeat steps 5 – 8.

To restore the factory settings for all the items
Select "STANDARD" on the program palette menu, and click the rocker control;
or, press STANDARD on the Remote Commander.
All the items, including TRINTONE (p. 52) and NR (p. 53) return to their original factory settings.

To adjust picture contrast
You can also adjust picture contrast with the PICTURE +/- buttons on the Remote Commander.
(Inner panel)

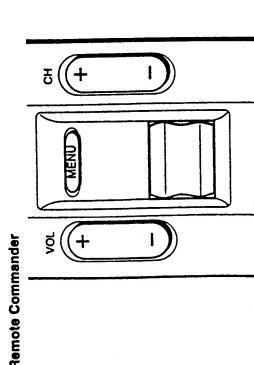


To adjust other items
Repeat steps 5 – 8.

To restore the factory settings for all the items
Select "STANDARD" on the program palette menu, and click the rocker control;
or, press STANDARD on the Remote Commander.
All the items, including TRINTONE (p. 52) and NR (p. 53) return to their original factory settings.

To return to the normal screen
Press MENU on the Remote Commander.

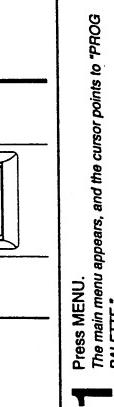
Setting the TRINITONE mode
 Color picture tubes are usually manufactured with a fixed color temperature (Tint) that determines the "warmness" (red tint) or "coolness" (blue tint) of the picture. Use the Sony Trinitone feature to adjust the picture color to your preference.



- 4** Click the rocker control.
 The VIDEO screen appears.



- 5** Press the rocker control up or down until the cursor points to 'TRINITONE'.



- 7** Press the rocker control up or down to select "HIGH" or "LOW".
 Select "HIGH" to make the picture cool (bluish).
 Select "LOW" to make the picture warm (reddish).

- 8** Click the rocker control.
 The setting is complete.

To return to the previous menu
 Press the rocker control up or down until the cursor points to "► MENU".
 Then click the rocker control.
 To return to the main menu
 Repeat the above, until you reach the main menu.
 To return to the normal screen
 Press MENU on the Remote Commander.

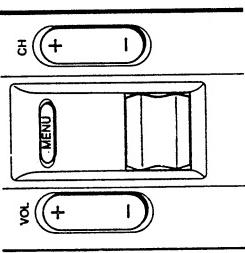
- 3** Press the rocker control up or down until the cursor points to "VIDEO".

- 4** Click the rocker control.
 The VIDEO screen appears.



Setting NR (picture noise reduction) ON or OFF
 Follow these instructions to reduce picture noise.

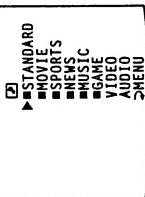
Remote Commander



- 1** Press MENU.
 The main menu appears, and the cursor points to "PROGRAM PALETTE".



- 2** Click the rocker control.
 The program palette menu appears.



- 3** Press the rocker control up or down until the cursor points to "VIDEO".

- 4** Click the rocker control.
 The VIDEO screen appears.



- 5** Press the rocker control up or down until the cursor points to "NR".



- 6** Click the rocker control.
 The mode display turns red.

- 7** Press the rocker control up or down to select "ON" or "OFF".

Select "ON" to reduce picture noise.
 Select "OFF" to restore the normal picture.

- 8** Click the rocker control.
 The setting is complete.
- To return to the previous menu
 Press the rocker control up or down until the cursor points to "► MENU".
 Then click the rocker control.
 To return to the main menu
 Repeat the above, until you reach the main menu.
 To return to the normal screen
 Press MENU on the Remote Commander.

- 3** Press the rocker control up or down until the cursor points to "VIDEO".

- 4** Click the rocker control.
 The VIDEO screen appears.



1-13. ADJUSTING THE SOUND

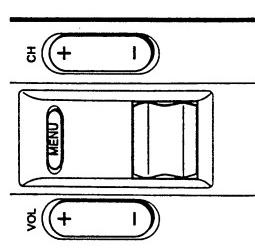
Setting S-VIDEO ON or OFF

Follow these instructions to set S-VIDEO on or off, depending on the kind of video equipment you have connected to the projection TV. For instructions on connecting video equipment, see pp. 15 - 18.

Remote Commander (Outer panel)

- 4** Click the rocker control.
The mode display turns red.

- 5** Press the rocker control up or down to select "ON" or "OFF."



- 6** Click the rocker control.
The setting is complete.

To return to the previous menu
Press the rocker control up or down until the cursor points to "▷ MENU."
Then click the rocker control.

Press MENU.

The main menu appears.



- 2** Press the rocker control up or down until the cursor points to "MODE SET".

- 3** Click the rocker control.
The mode set menu appears, with the cursor pointing to "S-VIDEO".



- 2** Press the rocker control up or down until the cursor points to "S-VIDEO".

Selecting a sound mode

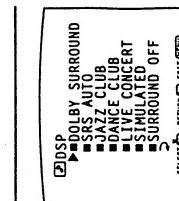
Use the DSP (Digital Sound Processor) menu to select the sound mode that best suits the type of sound you are listening to.
Example: Select JAZZ CLUB mode to enhance the effect when viewing a musical performance.

Remote Commander

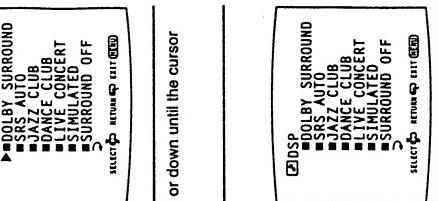
- 5** Click the rocker control.
The AUDIO screen appears.



- 6** Press the rocker control up or down until the cursor points to "DSP".



- 7** Click the rocker control.
The DSP menu appears.

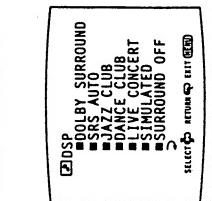


- 8** Click the rocker control.
JAZZ CLUB mode is selected.



- 1** Press MENU.
The main menu appears.

- 2** Press the rocker control up or down until the cursor points to "PROG PALETTE".



- 3** Click the rocker control.
The program palette menu appears.

To select a different mode
Repeat steps 8 - 9. (See the next page for the different modes you can choose.)

To further adjust the sound
Follow the instructions on pp. 57 - 58.

To return to the previous menu
Press A/V WINDOW +/- until the cursor points to "▷ MENU."
Then press RETURN.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

Press MENU on the Remote Commander.

When you select DOLBY SURROUND* mode
You receive wraparound sound with three-dimensional audio depth and presence when you connect main speakers and optional rear speakers.

Note
You must set REAR SPEAKER to "YES" (p. 60), or the display is blacked out and cannot be selected.
When using rear speakers, control the volume with the REAR VOLUME adjustment screen.

When you select SRS AUTO mode

You receive powerfully realistic sound that recaptures audio "clues" originally present but masked in the recording process, so that the action seems to happen all around you.

When you select JAZZ CLUB mode

You receive sound that gives a sense of space, with a touch of echo added.

When you select DANCE CLUB mode

You receive the sound effect of the hard floor and wall environment of a dance club.

When you select LIVE CONCERT mode

You receive sound that simulates the effect of being present at a live concert.

When you select SIMULATED mode

You receive monaural sound with a surround-like effect.

When you select SURROUND OFF mode

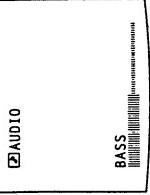
You receive sound without a surround effect.

To further adjust sound qualities
Follow the instructions on pp. 57 - 58.

* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following Patents: U.S. numbers 3,632,866, 3,746,732 and 3,959,590. "Dolby" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

Adjusting sound quality
Follow these instructions to adjust the TREBLE, BASS and BALANCE.

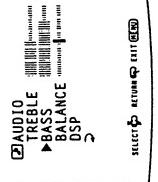
5 Click the rocker control.
6 The adjustment screen appears.



7 Press the rocker control up or down to make the adjustment.

Sound quality	Press the rocker control up	Press the rocker control down
TREBLE	To increase the treble response	To decrease the treble response
BASS	To decrease the bass response	To emphasize the left speaker's volume
BALANCE	To emphasize the right speaker's volume	

8 Press the rocker control.
9 The adjustment is complete, and the AUDIO screen automatically reappears.

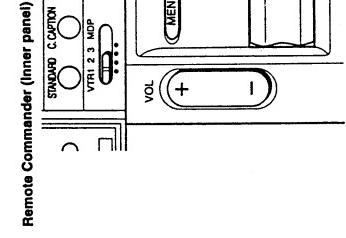


To adjust other items
Repeat steps 5 - 9.
To restore the factory settings for all the items
Select "STANDARD" on the program palette menu, and click the rocker control; or, press STANDARD on the Remote Commander.
All the items return to their original factory settings.

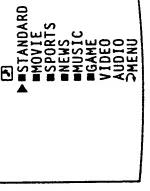
To return to the previous menu
Press the rocker control up or down until the cursor points to "MENU." Then click the rocker control.
To return to the main menu
Repeat the above, until you reach the main menu.
To return to the normal screen
Press MENU on the Remote Commander.

To return to the normal screen
Press MENU on the Remote Commander.

1 Press MENU.
2 The main menu appears, and the cursor points to "PROG PALETTE."



3 Press the rocker control up or down until the cursor points to "AUDIO."
4 Click the rocker control.
5 The AUDIO screen appears.

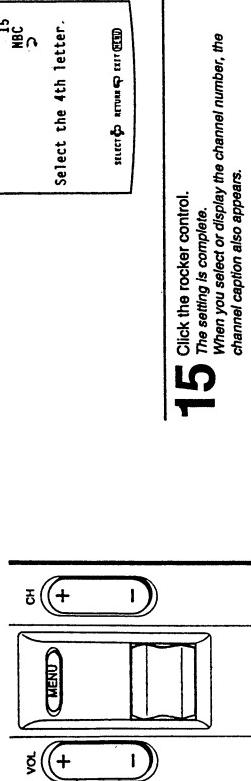


6 The AUDIO screen appears.
7 The adjustment screen appears.

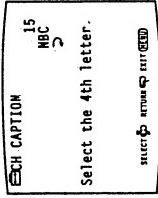


Setting channel captions – CH CAPTION
(Cont'd. from previous page)

Remote Commander



- 14** Press the rocker control up or down to select a blank space.



Select the 4th letter.

- Setting VIDEO LABEL**
Follow these instructions to label each input mode, in order to identify the equipment connected to each input terminal.

Example: Label VIDEO 1 IN as "VHS".

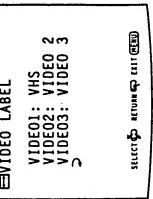
- 1** Press MENU.
The main menu appears.



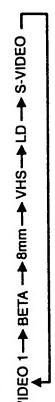
- 6** Press the rocker control up or down until the cursor points to the input mode you want to label. (In this case, the cursor is already pointing to "VIDEO 1".)

- 7** Click the rocker control.
The label display turns red.

- 8** Press the rocker control up or down to select "VHS".



- 9** Click the rocker control up or down to select "VHS".



- 10** Press the rocker control up or down to select "B".

To caption more channels
Repeat steps 6 – 15.

- 11** Click the rocker control.
The setting is complete.
When you select or display the channel number, the channel caption also appears.

- 12** Press the rocker control up or down to select "C".

- 13** Click the rocker control.
The fourth caption space turns red.

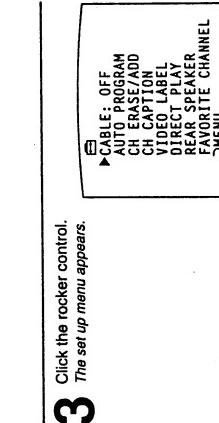
- 14** Press the rocker control up or down to select a blank space.

Repeat steps 6 – 15.

- 15** Click the rocker control.
The setting is complete.
When you select or display the channel number, the channel caption also appears.

- 2** Press the rocker control up or down until the cursor points to "SET UP".

- 3** Click the rocker control.
The set up menu appears.

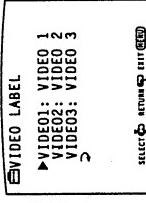


- 4** Press the rocker control up or down until the cursor points to "VIDEO LABEL".

- 5** Click the rocker control.
The VIDEO LABEL screen appears.

- 6** Press the rocker control up or down until the cursor points to "VIDEO 1".

- Note**
You can set up to 32 channel captions. If the memory is full, "The memory is full, sorry" appears on the screen. Erase any unnecessary captions, and begin again.



select return exit

- 7** Click the rocker control.

- 8** The label display turns red.

- 9** Click the rocker control.

- 10** The setting is complete.
When you select or display the video mode, the video label appears.

- 11** To label other input modes
Repeat steps 6 – 9.

- 12** To change a label
Same as above.

- 13** To return to the previous menu
Press the rocker control up or down until the cursor points to "MENU." Then click the rocker control.

- 14** To return to the main menu
Repeat the above, until you reach the main menu.

- 15** To return to the normal screen
Press MENU on the Remote Commander.

- 16** To return to the main menu
Repeat the above, until you reach the main menu.

- 17** To return to the normal screen
Press MENU on the Remote Commander.

- 18** To return to the main menu
Repeat the above, until you reach the main menu.

- 19** To return to the normal screen
Press MENU on the Remote Commander.

- 20** To return to the main menu
Repeat the above, until you reach the main menu.

- 21** To return to the normal screen
Press MENU on the Remote Commander.

- 22** To return to the main menu
Repeat the above, until you reach the main menu.

- 23** To return to the normal screen
Press MENU on the Remote Commander.

- 24** To return to the main menu
Repeat the above, until you reach the main menu.

- 25** To return to the normal screen
Press MENU on the Remote Commander.

- 26** To return to the main menu
Repeat the above, until you reach the main menu.

- 27** To return to the normal screen
Press MENU on the Remote Commander.

- 28** To return to the main menu
Repeat the above, until you reach the main menu.

- 29** To return to the normal screen
Press MENU on the Remote Commander.

- 30** To return to the main menu
Repeat the above, until you reach the main menu.

- 31** To return to the normal screen
Press MENU on the Remote Commander.

- 32** To return to the main menu
Repeat the above, until you reach the main menu.

1-15. USING TIMER-ACTIVATED FUNCTIONS

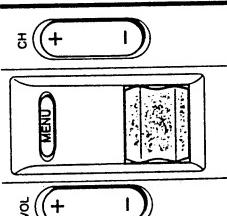
Setting DAYLIGHT SAVING

If you live in an area that uses daylight savings time, set DAYLIGHT SAVING to "YES" or "NO" depending on the season, before setting the current time. At the next daylight savings date, you will be able to automatically adjust all the time-related settings (CURRENT TIME, ON/OFF TIMER and CHANNEL BLOCK) simply by changing the DAYLIGHT SAVING setting.

When setting DAYLIGHT SAVING:

- After the first Sunday in April (spring daylight savings)
 - Set to "YES" before setting the current time.
 - Then, on the last Sunday in October (fall daylight savings), set to "NO".
 - All the time-related settings automatically move one hour back.
- After the last Sunday in October (fall daylight savings)
 - Set to "NO" before setting the current time.
 - Then, on the first Sunday in April (spring daylight savings), set to "YES".
 - All the time-related settings automatically move one hour ahead.

Remote Commander



Follow these instructions to set DAYLIGHT SAVING to "YES" or "NO".

- 1 Press MENU.
The main menu appears.

To return to the previous menu
Press the rocker control up or down until the cursor points to "► MENU".
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

- 3 Click the rocker control.
The time menu appears.



- 4 Press the rocker control up or down until the cursor points to "DAYLIGHT SAVING".

5 Click the rocker control.
5 The mode display turns red.

To return to the previous menu

Press the rocker control up or down to select "YES" or "NO".
The setting is complete.

- 7 Click the rocker control.

To return to the previous menu
Press the rocker control up or down until the cursor points to "► MENU".
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

Setting the clock — CURRENT TIME SET

Follow these instructions to set the current time. The correct current time must be set in order to use the other time-related functions (DAYLIGHT SAVING, ON/OFF TIMER, CHANNEL BLOCK).

Example: Set the time to 3:15 PM, Monday.

- 1 Press MENU.
The main menu appears.



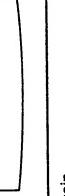
- 2 Press the rocker control up or down until the cursor points to "TIME".

3 Click the rocker control.
3 The time menu appears, and the "CURRENT TIME SET" screen appears.



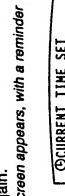
- 4 Press the rocker control up or down to select "MON".

5 Click the rocker control.
5 The CURRENT TIME SET screen appears, and the "SUN" display appears (red).



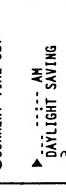
- 6 Press the rocker control up or down to select "MON".

7 Click the rocker control.
7 The CURRENT TIME SET screen appears.



- 8 Press the rocker control up or down to select "15".

9 Click the rocker control.
9 The CURRENT TIME SET screen appears.



- 10 Press the rocker control up or down to select "00".

11 Click the rocker control.
11 The CURRENT TIME SET screen appears.



- 12 Press the rocker control up or down to select "PM".

13 Click the rocker control.
13 The CURRENT TIME SET screen appears.

- 14 Press the rocker control again.
The CURRENT TIME SET screen appears, with a reminder to set DAYLIGHT SAVING.

If you do not need to set DAYLIGHT SAVING, click the rocker control and continue from step 5.

To set daylight saving

If you live in an area that uses daylight savings time, set DAYLIGHT SAVING up or down until the cursor points to "DAYLIGHT SAVING".

- a Press the rocker control up or down until the cursor points to "DAYLIGHT SAVING".
- b Click the rocker control.
The time menu appears, and the cursor points to "DAYLIGHT SAVING."
- c Click the rocker control.

- d Press the rocker control up or down to select "YES" or "NO".
- e Click the rocker control.
The setting is complete.

- f Press the rocker control up or down until the cursor points to "TIME".
- g Click the rocker control.
The CURRENT TIME SET screen appears, and the "SUN" display changes consecutively.

- h Press the rocker control up or down to select "MON".
- i Click the rocker control.
The CURRENT TIME SET screen appears.

- j Press the rocker control up or down to select "15".
- k Click the rocker control.
The CURRENT TIME SET screen appears.

- l Press the rocker control up or down to select "00".
- m Click the rocker control.
The CURRENT TIME SET screen appears.

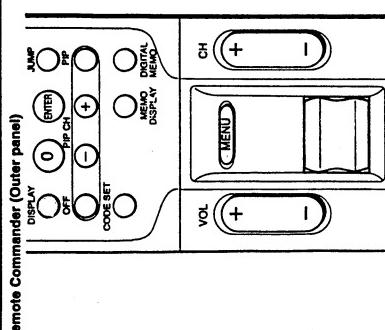
- n Press the rocker control up or down to select "PM".
- o Click the rocker control.
The CURRENT TIME SET screen appears.

- p Press the rocker control again.
The CURRENT TIME SET screen appears, with a reminder to set DAYLIGHT SAVING first if needed.

(Continued)

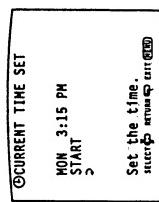
Setting the clock — CURRENT TIME SET

(Cont'd from prev. page)



10 Press the rocker control up or down to select "15" (minutes).

Each time you press the rocker control up or down, the minutes change in sequence.



11 Click the rocker control. The cursor points to "START."

The setting is complete.

12 Click the rocker control. To start the clock.

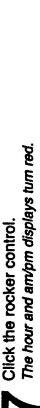
The setting is complete.

7 Click the rocker control.

The hour and am/pm displays turn red.

8 Press the rocker control up or down to set "3:00PM."

Each time you press the rocker control up or down, the hour changes in sequence beginning with "12:00AM."



9 Click the rocker control.

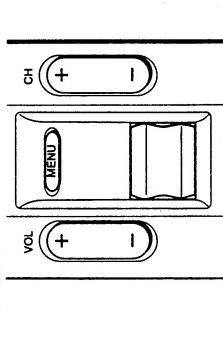
The minute display turns red.

Setting the ON/OFF TIMER

Follow these instructions to make the program of your choice appear on the screen at a specified time.

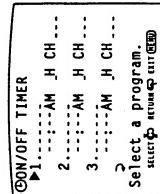
Example: Set the timer to turn on the projection TV every Monday through Friday at 1:30 AM for 3 hours, on channel 8, as PROGRAM 1. (You can set up to three programs.)

Remote Commander



5 Click the rocker control. To "1."

The ON/OFF TIMER screen appears, and the cursor points to "1".

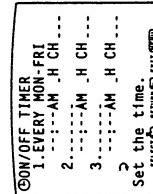


6 To set program 1, click the rocker control.

(To set program 2 or 3, press the rocker control up or down until the cursor points to that program; then click the rocker control.)

The day input space turns red.

7 Press the rocker control up or down to select "EVERY MON-FRI"; then click the rocker control. Each time you press the rocker control up, the days of the week change as shown in Fig. 1 (p. 67).



1 Press MENU.

The main menu appears.



2 Press the rocker control up or down to select "TIME".

Each time you press the rocker control up or down, the hour changes in sequence.

3 Click the rocker control. The time menu appears.

To return to the previous menu
Press the rocker control up or down until the cursor points to "2 MENU."
Then click the rocker control.

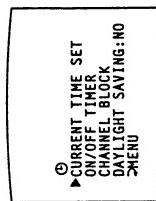
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

8

Press the rocker control up or down to select "1:00AM"; then click the rocker control.

The day input space turns red.



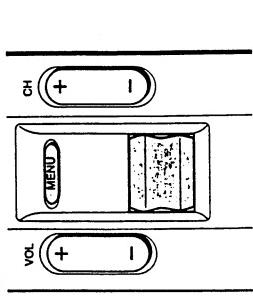
9

Press the rocker control up or down until the cursor points to "ON/OFF TIMER."

(Continued)

Setting the ON-OFF TIMER (Cont'd from prev. page)

Remote Commander



9 Press the rocker control up or down to select "30" (minutes); Then click the rocker control.

Each time you press the rocker control up or down, the minutes change in sequence.

ON/OFF TIMER
1.EVERY MON-FRI
2.1:30AM 3H CH ...
3.----AM H CH ...
2----AM H CH ...
Set the duration.
start & turn off

10 Press the rocker control up or down to select "3" (hour duration); then click the rocker control.

Each time you press the rocker control up or down, the duration changes from "1" - "6" in sequence.

ON/OFF TIMER
1.EVERY MON-FRI
2.1:30AM 3H CH ...
3.----AM H CH ...
2----AM H CH ...
Set the duration.
start & turn off

11 Press the rocker control up or down to select "8" (channel); then click the rocker control.

The TIMER/STAND BY indicator lights, indicating that the setting is complete.

Each time you press the rocker control up or down, the channel number changes from 1 - 125 in sequence.

ON/OFF TIMER
1.EVERY MON-FRI
2.1:30AM 3H CH 8
3.----AM H CH ...
2----AM H CH ...
Select a program.
start & turn off

The display "TV WILL TURN OFF" appears on the screen one minute before the timer duration ends.

To set program 2 or 3.
Click the rocker control and repeat steps 6 - 11.

To erase an ON/OFF TIMER setting
Display the ON/OFF TIMER screen, select the setting you want to erase, and select the undefined spaces for the day setting.
The ON/OFF TIMER setting is erased.

To enter a new ON/OFF TIMER setting
Display the ON/OFF TIMER screen and repeat steps 6 - 11.

To return to the previous menu
Press the rocker control up or down until the cursor points to "2 MENU." Then click the rocker control.

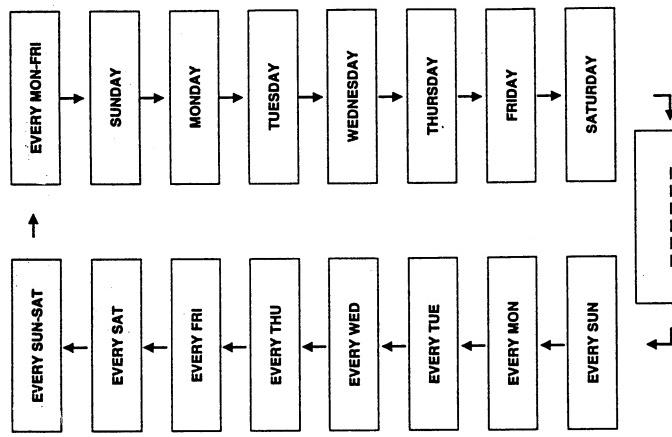
To return to the main menu

Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

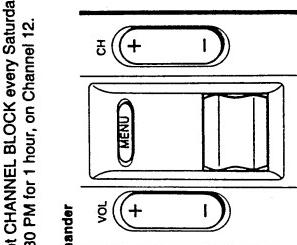
Note
If you unplug the projection TV or a power failure occurs, both the clock and timer settings will be erased. Reset the current time, then set the timer.

Fig. 1
Selecting the day(s) of the week
When you press the rocker control up, the days of the week appear in the following order:



Setting CHANNEL BLOCK

Follow these instructions to prevent a channel from appearing on the screen during the time that you specify. You can use this function to prevent children from watching unsuitable programs.



Note If you have not set the current time, the "CHANNEL BLOCK" display
shades and cannot be selected.

1 Press MENU.
The main menu appears.

2 Press the rocker control up or down until the cursor points to "TIME."

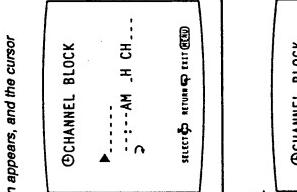
3 Click the rocker control.
The time menu appears.

- ⑤ CURRENT TIME SET
- ON/OFF TIMER
- CHANNEL BLOCK
- DAYLIGHT SAVING: NO
- > MENU

At the specified time, "BLOCKED" appears in red on the screen, and the picture of the specified channel is blocked and the sound is muted.

4 Press the rocker control up or down until the cursor points to "CHANNEL BLOCK."

Appearing on the screen during the time that you specify, you can use this function to prevent children from watching unsuitable programs.



7 Press the rocker control up or down to select "EVERY SAT"; then click the rocker control. Each time you press the rocker control up or down, the days of the week change as shown in Fig. 1 (p. 87).

©CHANNEL BLOCK
EVERY SAT
12:00AM .H CH---
2
Set the time.
SELECT RETURN EXIT (END)

8 Press the rocker control up or down to select "4:00PM"; then click the rocker control. Each time you press the rocker control up or down, the hour changes in sequence.

CHANNEL BLOCK

EVERY SAT
4:00PM _H CH ...
Set the time.
sun, mon, tue, wed, thu, fri, sat

9 Press the rocker control up or down to select “ 30° ” (minutes); then click the rocker control. *Each time you press the rocker control up or down, the CHANNEL BLOCK setting is erased.*

- To enter a new CHANNEL BLOCK setting**
Press the CHANNEL BLOCK screen and repeat steps
4 → 10. (You can only set one CHANNEL BLOCK at a time.)
- To return to the previous menu**
Press the rocker control up or down until the cursor points
to "→ MENU;"
Then click the rocker control.
- To return to the main menu**
Repeat the above, until you reach the main menu.
- To return to the normal screen.**
Press MENU on the Remote Commander.

11 Press the rocker control up or down to select "12" (channel); then click the rocker control. The setting is complete. Each time you press the rocker control up or down, the channel number changes from "1" to "12" in sequence.

BLOCKED

9 Press the rocker control up or down to select “:30” (minutes); then click the rocker control. Each time you press the rocker control up or down, the minutes change in sequence.

10 Press the rocker control up or down to select '1' (hour duration); then click the rocker control. Each time you press the rocker control up or down, the duration changes from '1' - '6' in sequence.

④ CHANNEL BLOCK
EVERY SAT 4:30PM 1H CH 12
Set the channel
select RETURN EXIT EXIT

11 Press the rocker control up or down to select “11” (channel); then click the rocker control. The setting is complete.

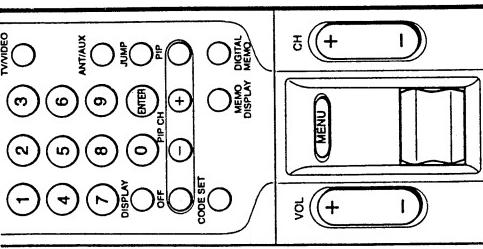
SELECT CHANNELS FROM LIST BELOW

BLOCKED

1-16. SETTING FAVORITE CHANNEL

By setting FAVORITE CHANNEL, you can select the channels you use most frequently (up to seven channels) simply by clicking the rocker control on the Remote Commander.

Remote Commander (Outer panel)



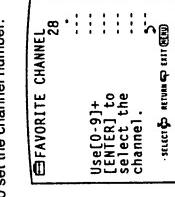
Follow these instructions to set the channels.

4 Press the rocker control up or down until the cursor points to "FAVORITE CHANNEL."

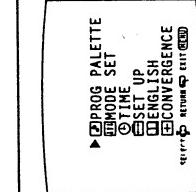
5 Click the rocker control.
The FAVORITE CHANNEL screen appears, and the cursor points to the first channel position.



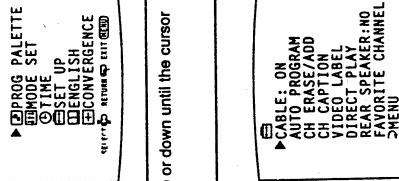
6 Press the rocker control up or down to select the channel position; then click the rocker control.



7 Press 0 – 9 and ENTER to set the channel number.



1 Press MENU.
The main menu appears.

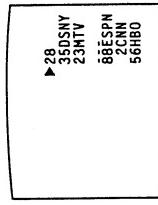


2 Press the rocker control up or down until the cursor points to "SET UP."

3 Click the rocker control.
The set up menu appears.

Selecting a favorite channel
After setting the channels, follow these instructions to select the channel you want to watch.

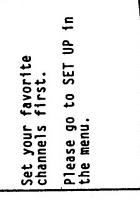
1 Click the rocker control.
The FAVORITE CHANNEL display appears.



Note
If you have set channel captions (pp. 61 – 62), the captions appear with the channel numbers.

2 Press the rocker control up or down to select the channel you want to watch; then click the rocker control.
The channel is selected.

3 If you click the rocker control on the Remote Commander before setting FAVORITE CHANNEL, this screen appears.



Note
Follow steps 1 – 8 to set your favorite channels, and then make the selection.

To set a favorite channel setting
Press the rocker control up or down until the cursor points to the channel number you want to erase; click the rocker control, then press 0 and ENTER.

To reset a favorite channel setting
Display the FAVORITE CHANNEL screen and repeat steps 6 – 8.

To return to the previous menu
Press the rocker control up or down until the cursor points to "MENU." Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

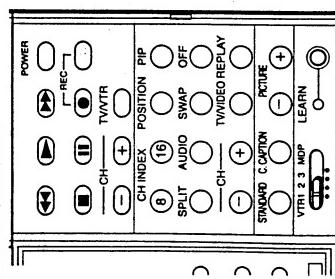
1-17. USING THE PROGRAMMABLE REMOTE COMMANDER

You can operate other video equipment (such as VCRs, video disc players and cable boxes) that have an infrared remote detector with this supplied Remote Commander.

Operating Sony video equipment

Follow these instructions to operate Sony video cassette recorders (Beta, 8 mm and VHS) and video disc players (including multi-disc players).

Remote Commander (inner panel)



- 1** Set the VTR1-2-3 MDP selector according to the video equipment you want to operate.

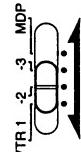


Fig. 2: Video equipment settings

If you want to operate as:	set to:
Beta, ED Beta VCR	VTR 1
8 mm VCR	VTR 2
VHS VCR	VTR 3
Video disc player	MDP

Fig. 4: Operating a Video Disc Player (MDP)	
To turn on or off	Press POWER.
To play	Press ▶.
To stop	Press ■.
To pause	Press ■.
	To resume normal playback, press again.
Note	This function is effective only for CAV (standard-play disc). With CLV (extended-play disc), the projection TV goes off (standby mode) if you press ■.
Keep pressing ▶ or ▷ during playback.	To resume normal playback, release the button.
To search the picture forward and backward	Keep pressing ▶ or ▷ during playback.

Notes	
• If the video equipment does not have a certain function, the corresponding button on this Remote Commander will not operate.	
• If you set another manufacturer's code to a VTR1-2-3 MDP selector position (pp. 76 – 77), you must also set the Sony code to operate Sony equipment.	
Caution	
When you replace the batteries, do it within approximately 30 minutes. Otherwise the settings you made under the Pre-Programmed function (pp. 76 – 78) and Learning function (p. 79) may be erased.	

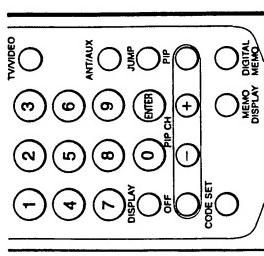
Fig. 3: Operating a VCR (VTR1, 2, 3)	
To turn on or off	Press POWER.
To change channels (when watching TV programs through the VCR's tuner)	Press CH +/-.
To record	Press ● and REC simultaneously.
To play	Press ▶.
To stop	Press ■.
To fast forward	Press ▶.
To rewind the tape	Press ▷.
To pause	Press ■.
	To resume normal playback, press again.
To search the picture forward and backward	Keep pressing ▶ or ▷ during playback.
	To resume normal playback, release the button.
To change input mode	Press TV/VRTR.

Operating non-Sony or Sony video equipment

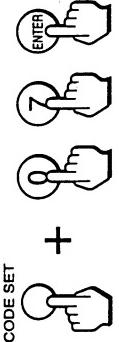
Follow these instructions to set the manufacturer's code, which will enable you to operate non-Sony and Sony video equipment with the pre-programmed Remote Commander.

Example: Operate an RCA video cassette recorder connected to the VIDEO 2 IN jacks.

Remote Commander

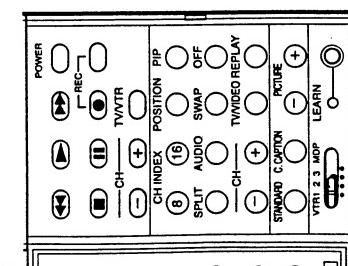


2 While pressing CODE SET, press 0, 7 and ENTER to set RCA's code number. (For manufacturer code numbers, see Figs. 5, 6 and 7 on p. 77.)



Note
A long beep sounds, indicating that the code has been set.
If you press a wrong code, or if the code has not been set, four short beeps sound. Repeat step 3 to set the code.

3 Use the video operating buttons to operate the connected equipment. (see Fig. 3 on p. 74 and Fig. 4 on p. 75.)



1 Set the VTR1-2-3 MDP selector to VTR2.



Note
To use another manufacturer's equipment besides a Sony VCR, set the selector to a position not being used for your Sony video equipment.

Fig. 5: VCR manufacturer code numbers

MANUFACTURER	CODE
SONY	01, 02, 03
CANON	05
EMERSON	22, 30, 33
FISHER	10, 11, 12, 15
FUNAI	29
GENERAL ELECTRIC	05, 08
GOLDSTAR	25
HITACHI	07, 08, 36
JVC	16, 35
MAGNAVOX	05, 06, 09
MITSUBISHI	18, 19, 26, 27
MULTITECH	29
NEC	16, 23, 31
PANASONIC	05, 06
PHILCO	05, 06
PHILIPS	05, 08, 09
QUASAR	05, 06
RCA	07, 08
SAMSUNG	24, 32
SANYO	11, 15
SCOTT	21
SHARP	13, 14
SHINTOM	34
SYLVANIA	05, 06, 09
SYMPHONIC	29
TEKNIKA	28, 29
TOSHIBA	20, 21
TOTE VISION	25
ZENITH	17

Fig. 7: Sony Equipment and Code Numbers

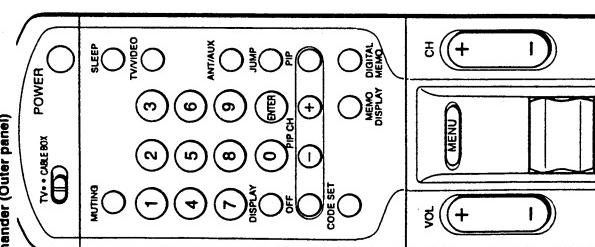
MANUFACTURER	CODE
SONY	04
KENWOOD	58
MAGNAVOX	52
MARANZ	54
mitsubishi	51
PANASONIC	55
PHILIPS	52
PIONEER	51
RCA	51
SANYO	57
SHARP	56
YAMAHA	53

Operating a cable converter box

Follow these instructions to set the manufacturer's code, which will enable you to operate a connected cable converter box with the pre-programmed Remote Commander.

Example: Operate a connected Zenith cable converter box.

Remote Commander (Outer panel)



2 While pressing CODE SET, press 6 and 8 (Zenith's code number — see Fig. 8) and ENTER.

CODE SET

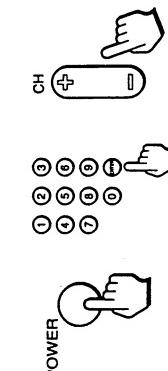


A long beep sounds, indicating that the code has been set.

Note

If you press a wrong code, or if the code has not been set, four short beeps sound. Repeat step 2 to set the code.

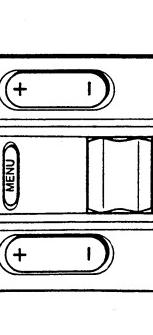
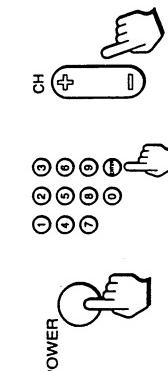
3 Use the projection TV control buttons (POWER, 0 – 9, ENTER and CH +/-) to operate the cable converter box.



Note

If you press a wrong code, or if the code has not been set, four short beeps sound. Repeat step 2 to set the code.

4 Set the TV/BOX selector to CABLE BOX.



1 Set the TV/BOX selector to CABLE BOX.

(Learning will not work in VTR1 or VTR2 settings.)

To return to the normal screen
Set the TV/BOX selector to TV; then use the projection TV control buttons to control the projection TV.

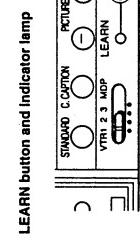
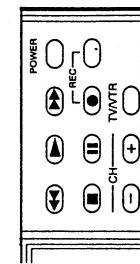
For more details on operating the cable box
Refer to the operating instructions that come with the cable box.

Do not move the remote commanders during the learning process.

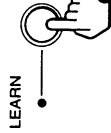
Operating non-Sony or Sony audio and video equipment (Learning function)

Follow these instructions to "teach" any of the programmable buttons to operate the function of another Remote Commander. Use Learning in order to operate non-Sony and Sony audio equipment, and a remote controlled cable converter box or video equipment whose manufacturer's code is not listed (Fig. 5, Fig. 6 – p. 77; Fig. 8 – p. 78).

Remote Commander (Inner panel)



3 Press LEARN.
The LEARN indicator lights up (red).



4 Momentarily press the button of the supplied Remote Commander, whose function you want to learn a function. The LEARN indicator goes off and lights up again, and a short beep sounds, indicating that the Remote Commander is ready for learning.

The Remote Commander beeps repeatedly if an error has occurred. Repeat this step.

5 Press and hold down the button of the other remote commander, whose function you want to "teach," until the LEARN indicator turns red. A long beep sounds and the LEARN indicator goes off and lights up again, indicating that learning is complete. If not, repeat steps 4 and 5.

6 Repeat steps 4 and 5 to teach functions to other buttons.

7 Press LEARN.
The LEARN indicator lamp lights up (red), then goes off, indicating that learning is complete.

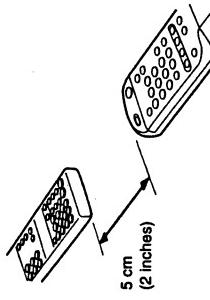
For accurate learning
Do not move the remote commanders during the learning process.

MANUFACTURER	CODE
JERROLD	60, 61, 62, 63, 64, 65
PIONEER	68, 70
SCIENTIFIC ATLANTA	66, 67
TOCOM	71, 72
ZENITH	68

1 Set the TV/CABLE BOX selector to CABLE BOX.



2 Place the supplied Remote Commander head to head with equipment's remote command, approximately 5 cm (2 inches) apart.



- If the memory is full, three short beeps sound and the LEARN indicator flashes off and on. Use learning to re-program a button whose learned function you do not use often; the previously learned function is erased.
- If the other remote commander's signal cannot be learned, a short beep sounds and the LEARN Indicator flashes once.
- If you press a button that cannot be used for learning, four short beeps sound and the LEARN indicator flashes four times.

- If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some rare cases, your equipment may use a code that is not provided with this Remote Commander and you may not be able to operate your cable converter box with the supplied Remote Commander. In this case, use the equipment's own remote control unit.

1-18. TROUBLESHOOTING

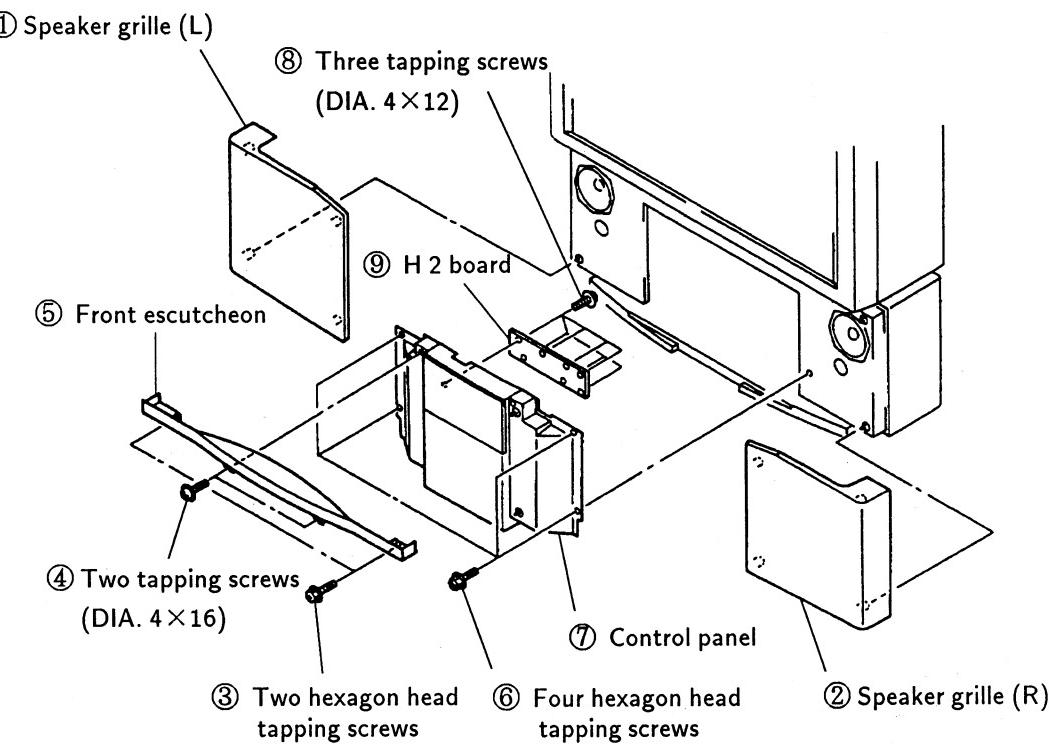
Disturbances in picture and sound can often be eliminated by checking the symptoms and following the suggestions listed here.
If the problem still cannot be solved, contact your nearest service facility.

Symptom	Possible causes and remedies
No picture (screen not lit), no sound	<ul style="list-style-type: none"> • Make sure POWER is switched on. • Check the power cord connection. • Check that the TV/VIDEO and VTR1-2-3 MDP controls are set correctly. • Make sure that the TV/CABLE BOX selector is set to TV.
Poor or no picture (screen not lit), good sound	<ul style="list-style-type: none"> • Adjust the picture using the VIDEO screen (pp. 50 – 53). • Check the antenna/cable connections. • Adjust the color registration (pp. 26 – 27).
Good picture, no sound	<ul style="list-style-type: none"> • Press VOLUME + on the projection TV or VOL + on the Remote Commander. • Press MUTING on the Remote Commander. • Check the MTS setting (p. 58). • Check that the TV/VIDEO and VTR1-2-3 MDP controls are set correctly. • Make sure SPEAKER is set correctly (p. 59).
No color for color programs	<ul style="list-style-type: none"> • Check the HUE and COLOR settings (pp. 50 – 51). • Check that it is an active or correct channel.
Snow and noise only	<ul style="list-style-type: none"> • Check the cable setting. • Check the ANT/AUX button setting. • Check antenna/cable connections.
Dotted lines or stripes	 <p>This is often caused by local interference (for example, cars, neon signs and hairdryers). Adjust the telescopic aerial for minimum interference.</p>
Double images or ghosts	 <p>Reflections from nearby mountains or buildings often cause this problem. Connecting a highly directional outdoor antenna or a CATV cable may improve the picture.</p>
Remote control does not operate	<ul style="list-style-type: none"> • Check the battery in the Remote Commander.
No picture and/or sound for the connected equipment	<ul style="list-style-type: none"> • Check that the TV/VIDEO button is set correctly. • Check that the connections are properly made. • Check that the power of the connected equipment is turned on. • Check that the connected equipment is set correctly.
	<p>Try another channel. It could be station trouble.</p>

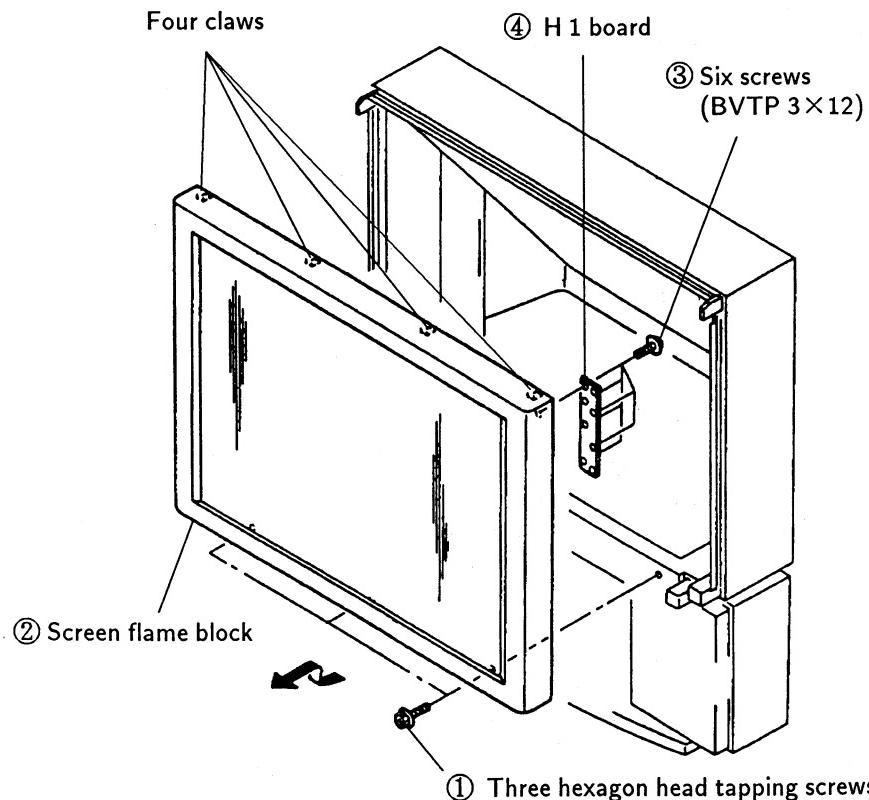
SECTION 2

DISASSEMBLY

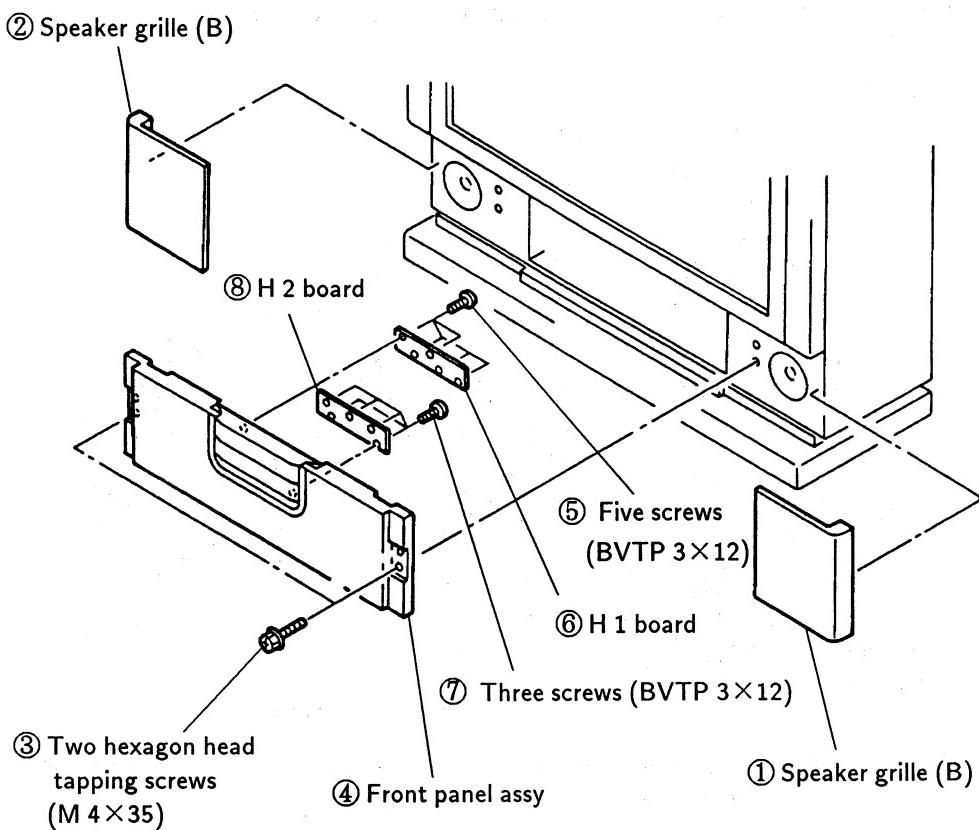
2-1. H 2 BOARD REMOVAL (KP-46 XBR 25/53 XBR 25 (US/CND) only)



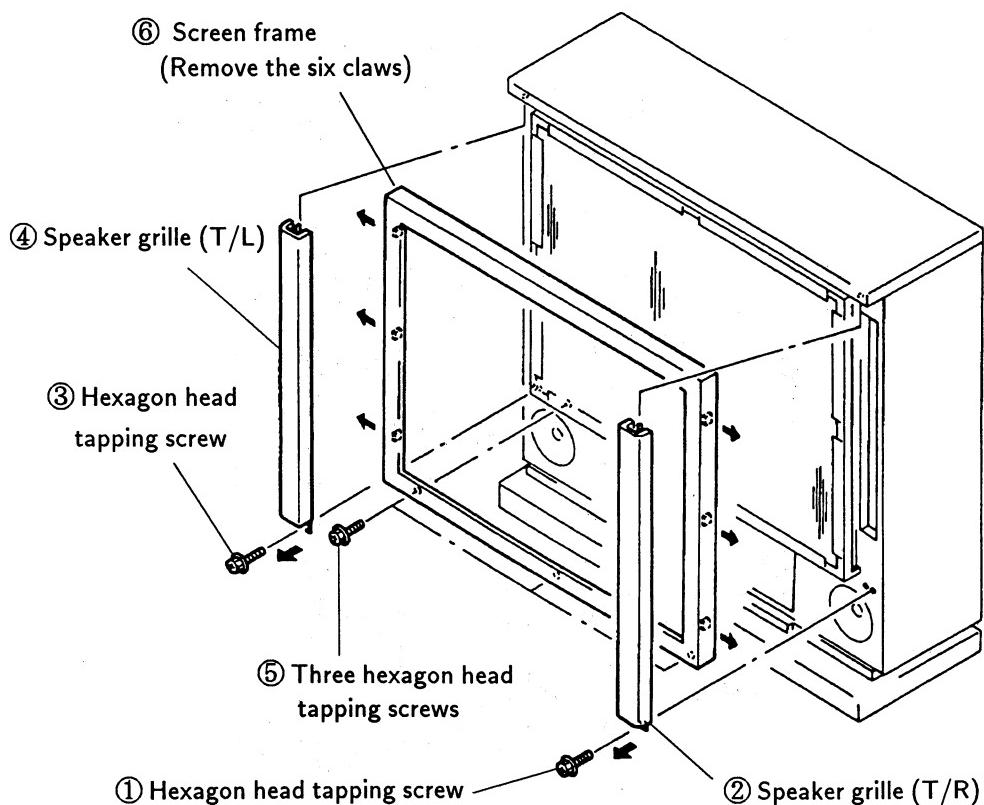
2-2. H 1 BOARD REMOVAL (KP-46 XBR 25/53 XBR 25 (US/CND) only)



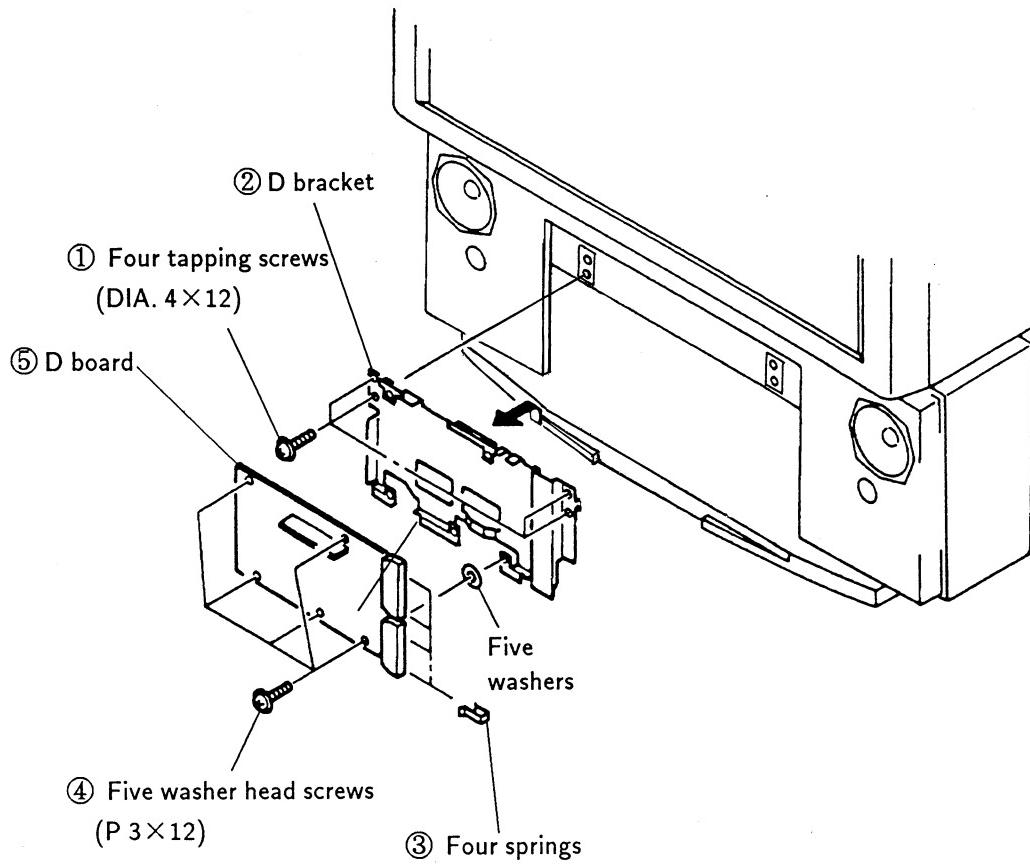
2-3-1. H 1 AND H 2 BOARDS REMOVAL (KP-61 XBR 28 only)



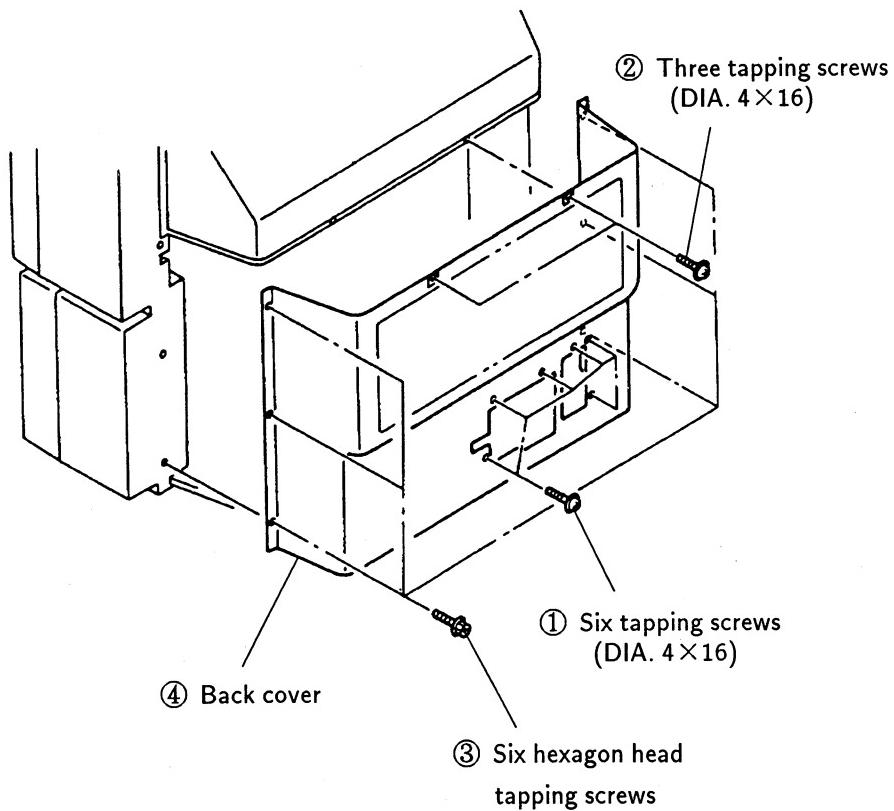
2-3-2. SCREEN FRAME REMOVAL (KP-61 XBR 28 only)



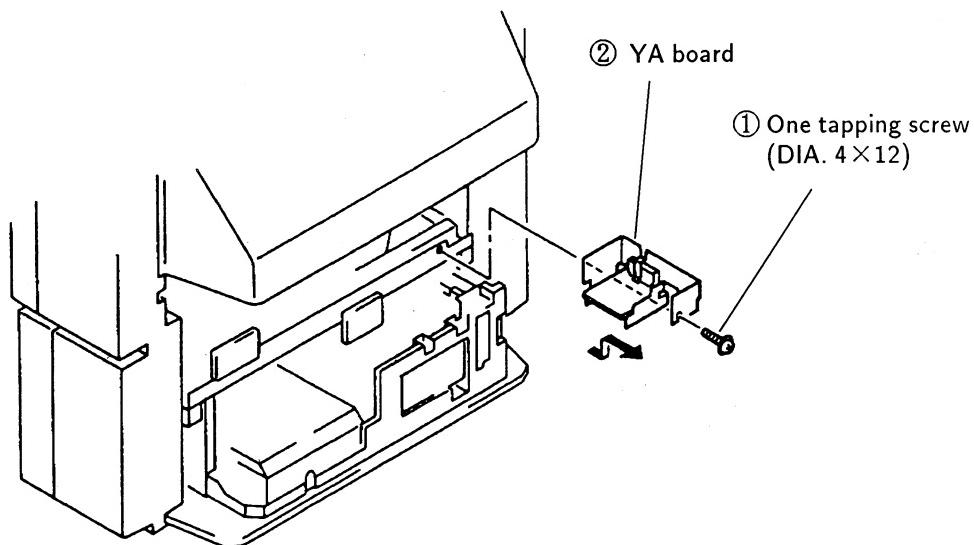
2-4. D BOARD REMOVAL



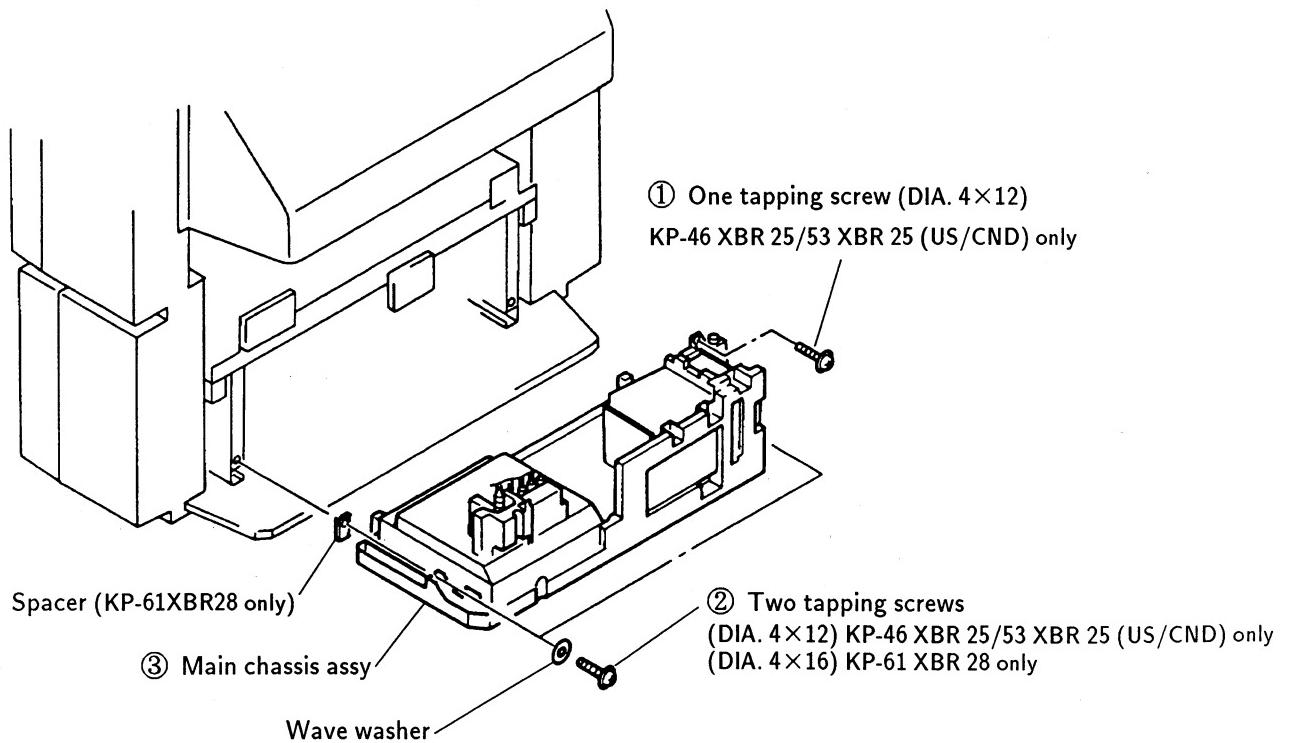
2-5. BACK COVER REMOVAL



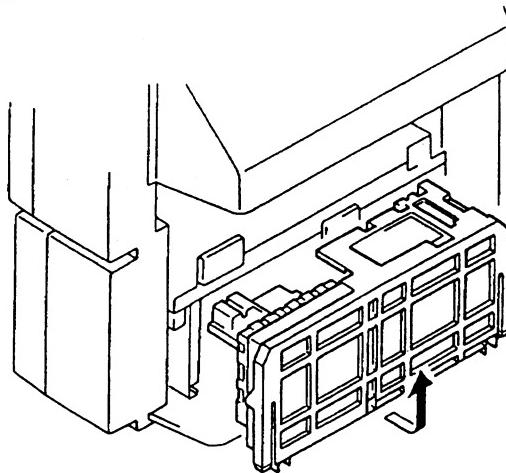
2-6. YA BOARD REMOVAL



2-7. MAIN CHASSIS ASSY REMOVAL



2-8. SERVICE POSITION



NOTES INSERTED IN SERVICE POSITION SECTION

Service Position Procedure

- (1) Remove the path locks where the harness comes into.
(MAIN bracket, G shield)
- (2) Remove the following connectors before removing the main bracket.
* HV grounding lead, G shield grounding lead, uT35 grounding lead (uT board), V-2 connector (V board).
- (3) Remove the main bracket. (Take care as the connector leads linking to the C and Z boards are considerably short.)
(MAIN bracket, G shield)

- (4) When pulling out the main bracket with power ON, be sure to connect the connectors removed.
* HV grounding lead, G shield grounding lead, uT35 grounding lead (uT board).

In case that grounding lead (Black) of HV Block is not connected with chassis grounding, it causes arcing of CRT and it is dangerous.

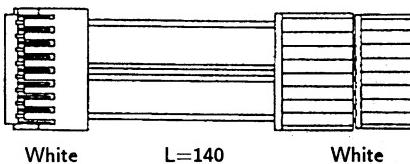
Be sure to connect grounding lead of HV Block with chassis grounding.

CONNECTOR CABLES

※ In order to put the set in the service position, use the extension connector cables below.

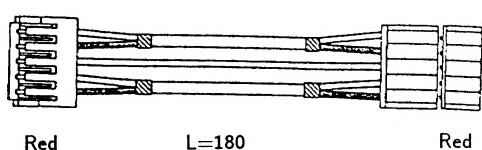
Parts No.	Connection
1-941-897-38	CB-4 (G-4)

- 1 : Brown
2 : —
3 : —
4 : Yellow
5 : Green
6 : —
7 : —
8 : Gray



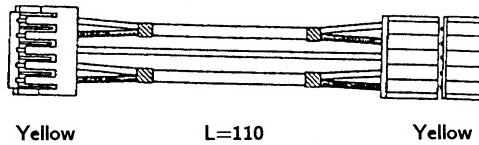
Parts No.	Connection
1-941-897-43	CR-15 (A-15)

- 1 : White/Gray
2 : Gray/Shield
3 : Orange
4 : Red/Gray
5 : Gray/Shield



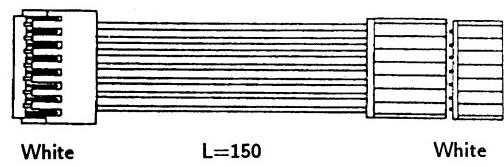
Parts No.	Connection
1-941-897-39	CG-16 (A-16)

- 1 : White/Gray
2 : Gray/Shield
3 : Orange
4 : Red/Gray
5 : Gray/Shield



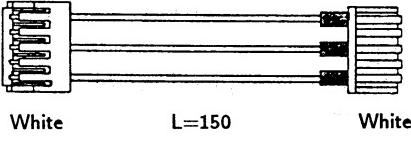
Parts No.	Connection
1-941-897-44	ZR-1 (D-1)

- 1 : Brown
2 : Red
3 : Orange
4 : Yellow
5 : Green
6 : Blue
7 : Violet



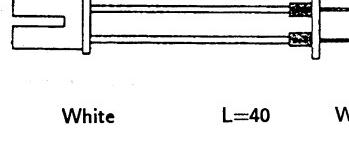
Parts No.	Connection
1-941-897-40	ZG-19 (A-19)

- 1 : Green
2 : —
3 : Black
4 : —
5 : Brown



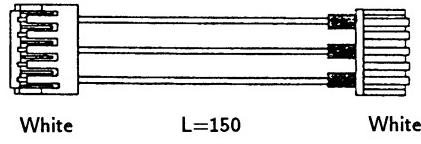
Parts No.	Connection
1-941-897-45	A-21 (CRT BRACKET)

- 1 : Black
2 : Black



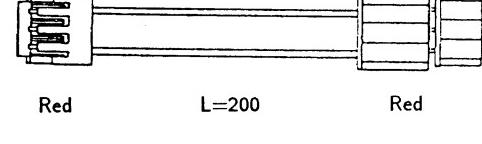
Parts No.	Connection
1-941-897-41	ZR-18 (A-18)

- 1 : Red
2 : —
3 : Black
4 : —
5 : Brown



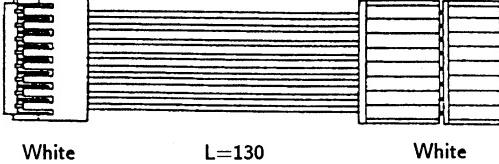
Parts No.	Connection
1-941-897-46	V-2 (ZR-3)

- 1 : Brown
2 : —
3 : Red



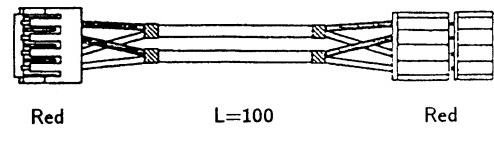
Parts No.	Connection
1-941-897-42	ZG-2 (D-2)

- 1 : —
2 : Red
3 : Orange
4 : Yellow
5 : Green
6 : Blue
7 : Violet
8 : Gray

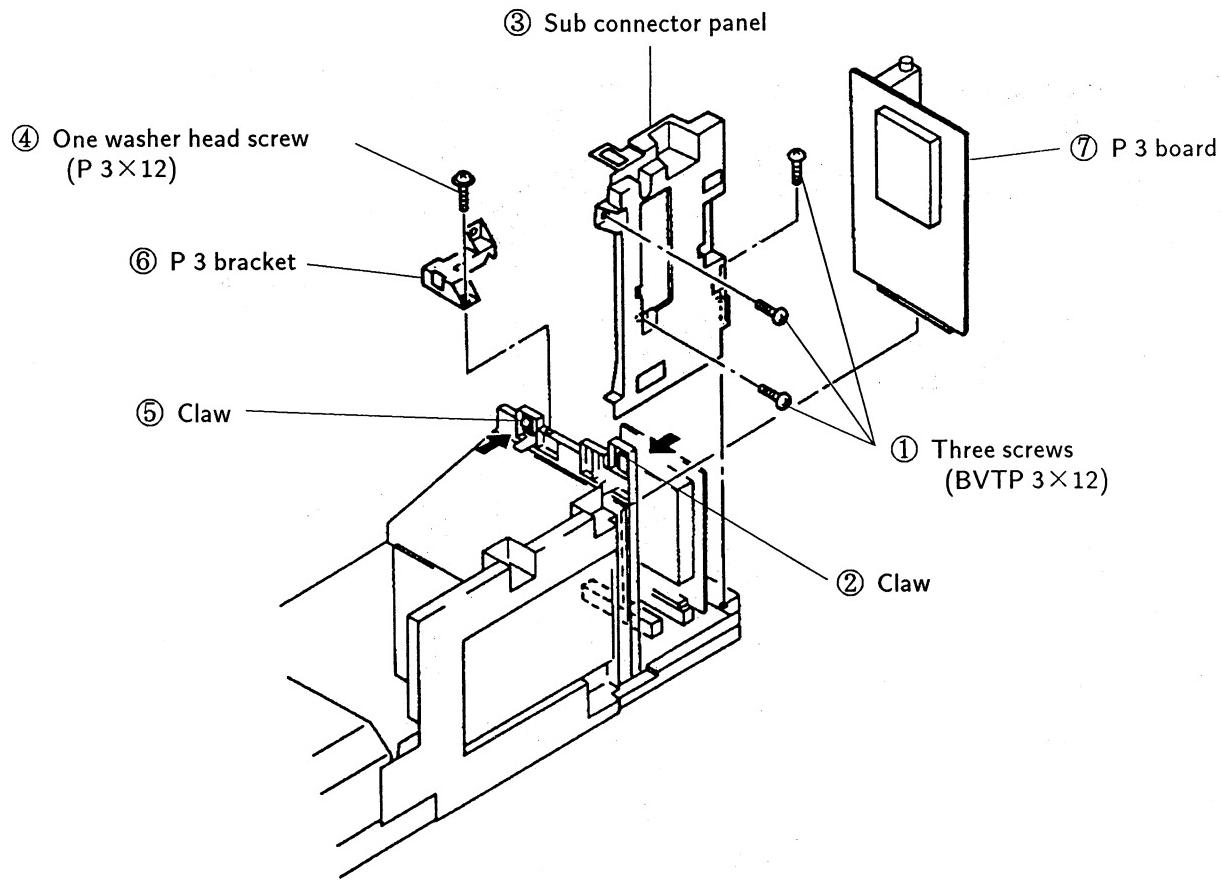


Parts No.	Connection
1-941-897-47	A-3 (YG-3)

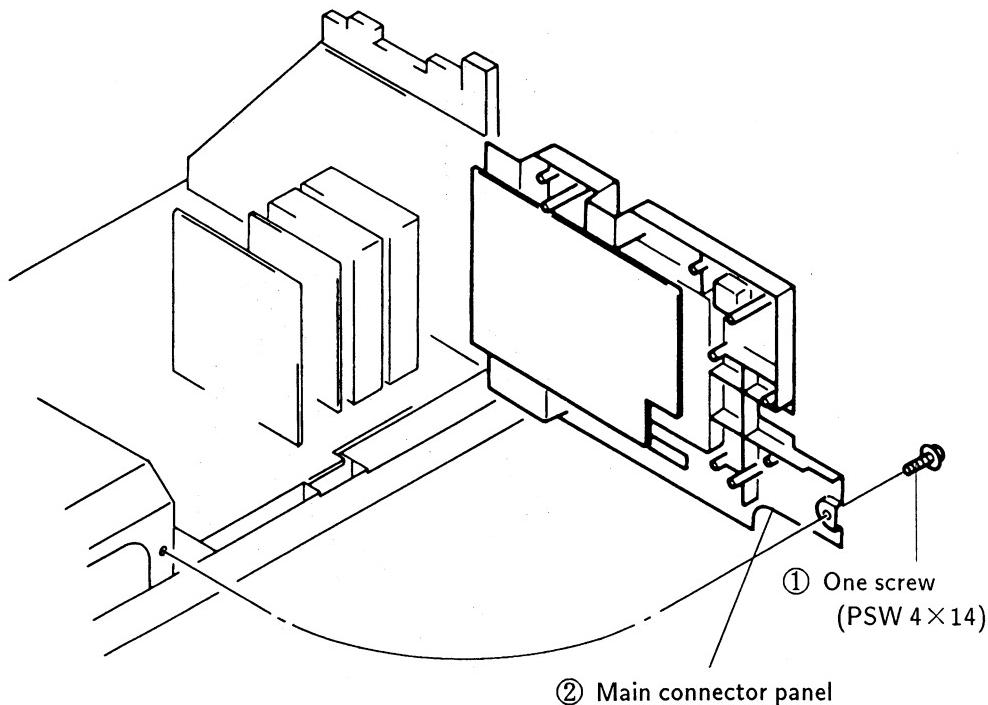
- 1 : Red
2 : White
3 : Gray/Shield
4 : Black



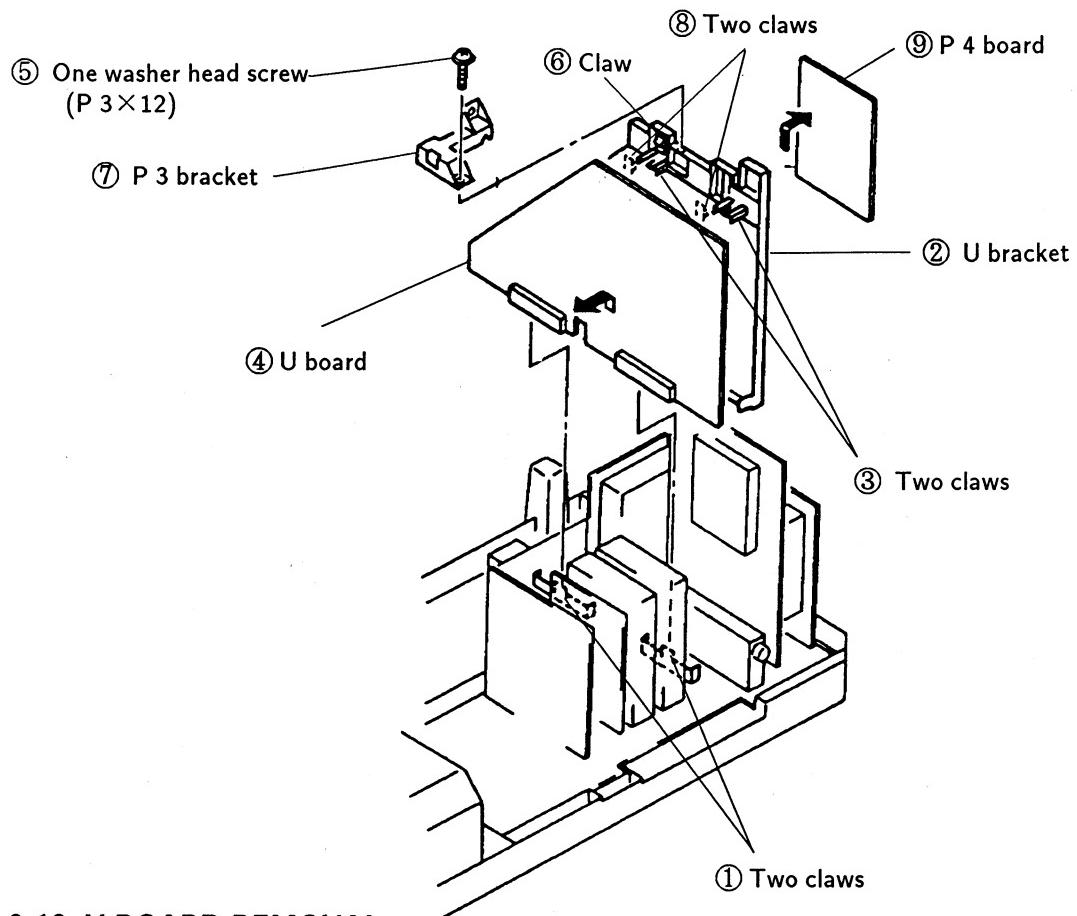
2-9. P 3 BOARD REMOVAL



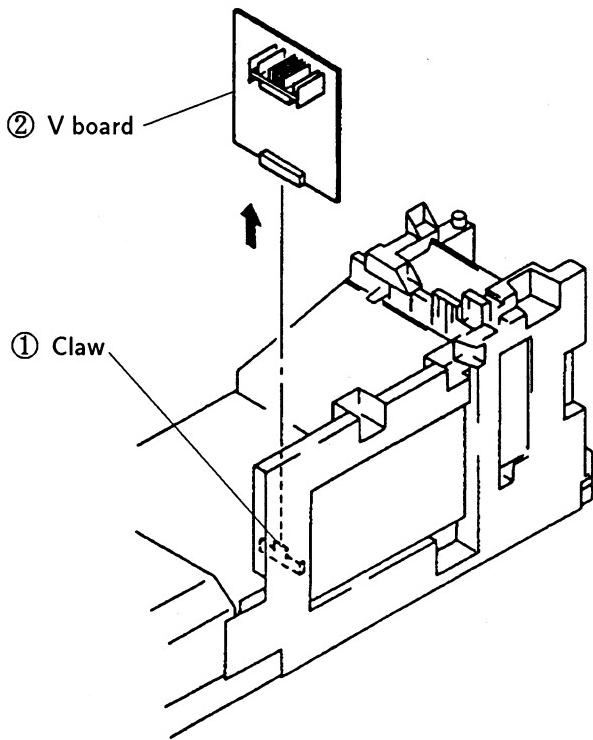
2-10. MAIN CONNECTOR PANEL REMOVAL



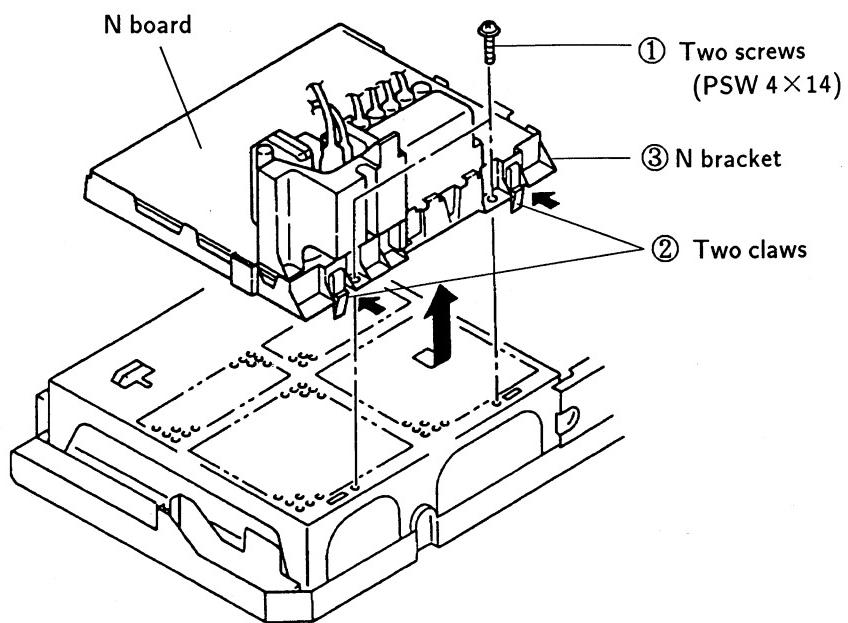
2-11. U AND P 4 BOARDS REMOVAL



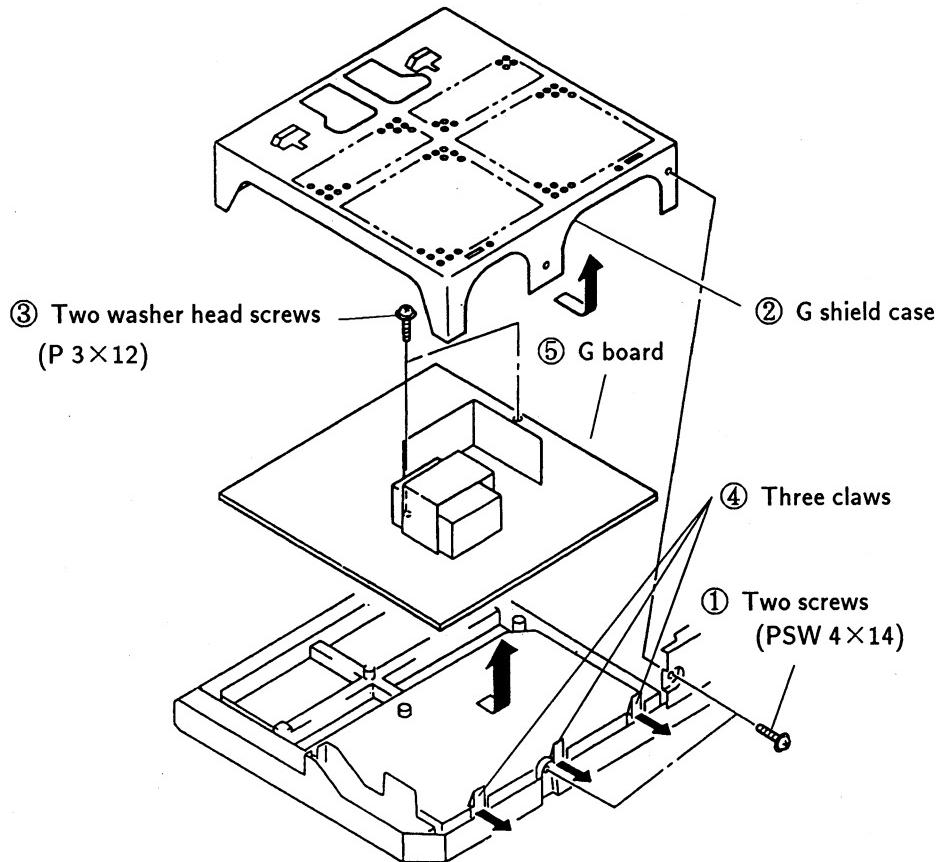
2-12. V BOARD REMOVAL



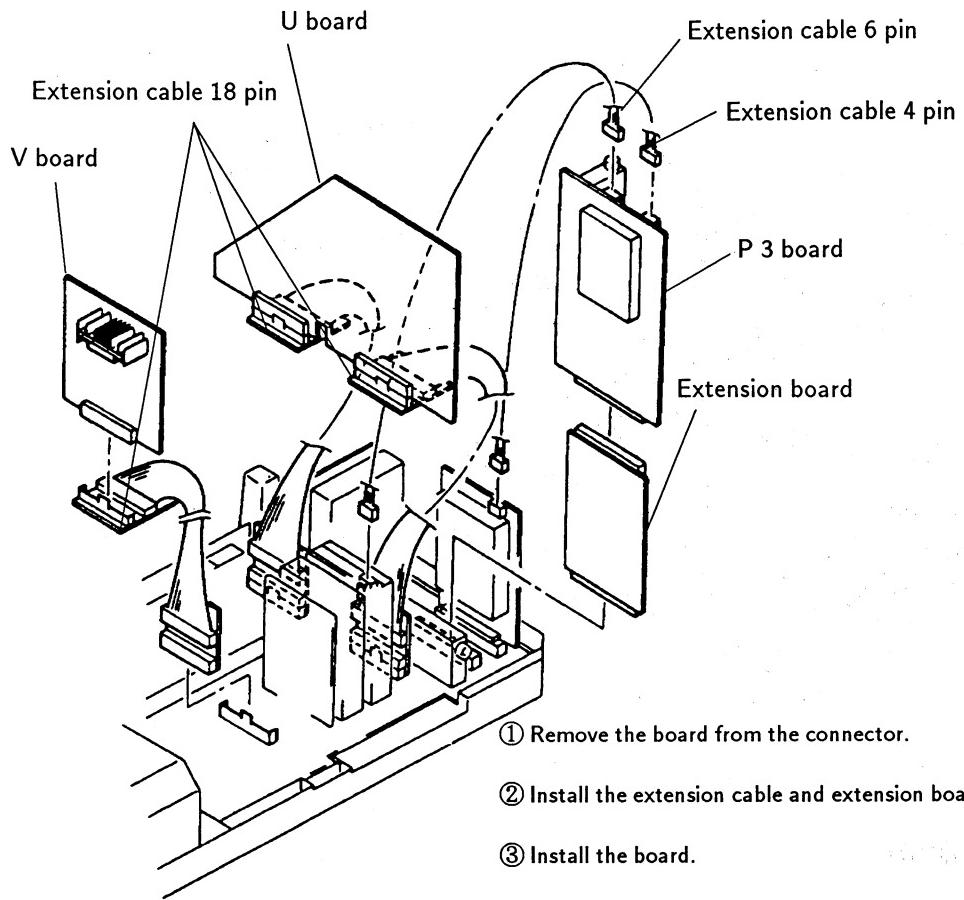
2-13. N BRACKET REMOVAL



2-14. G BOARD REMOVAL

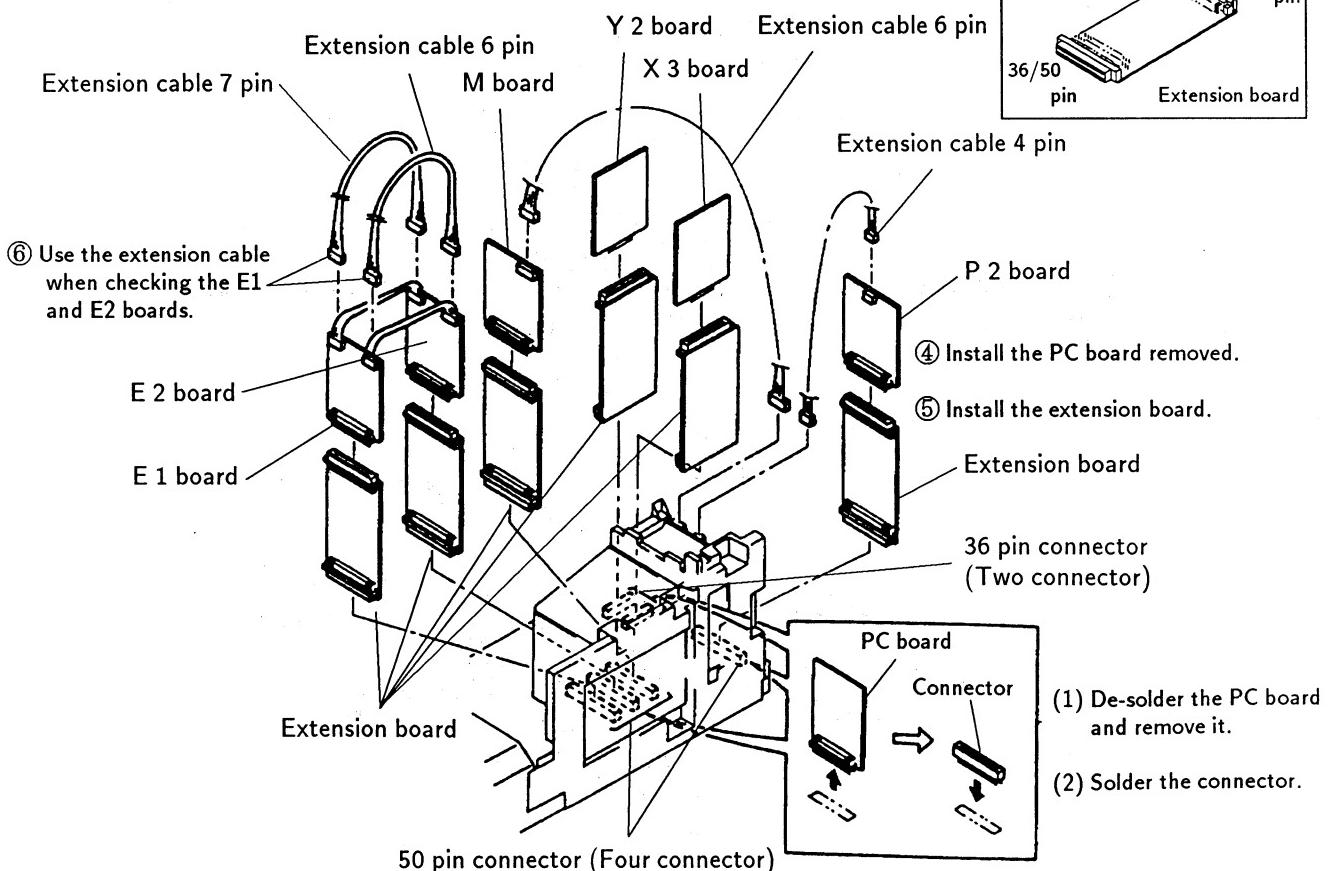


2-15-1. CONNECTOR CABLE

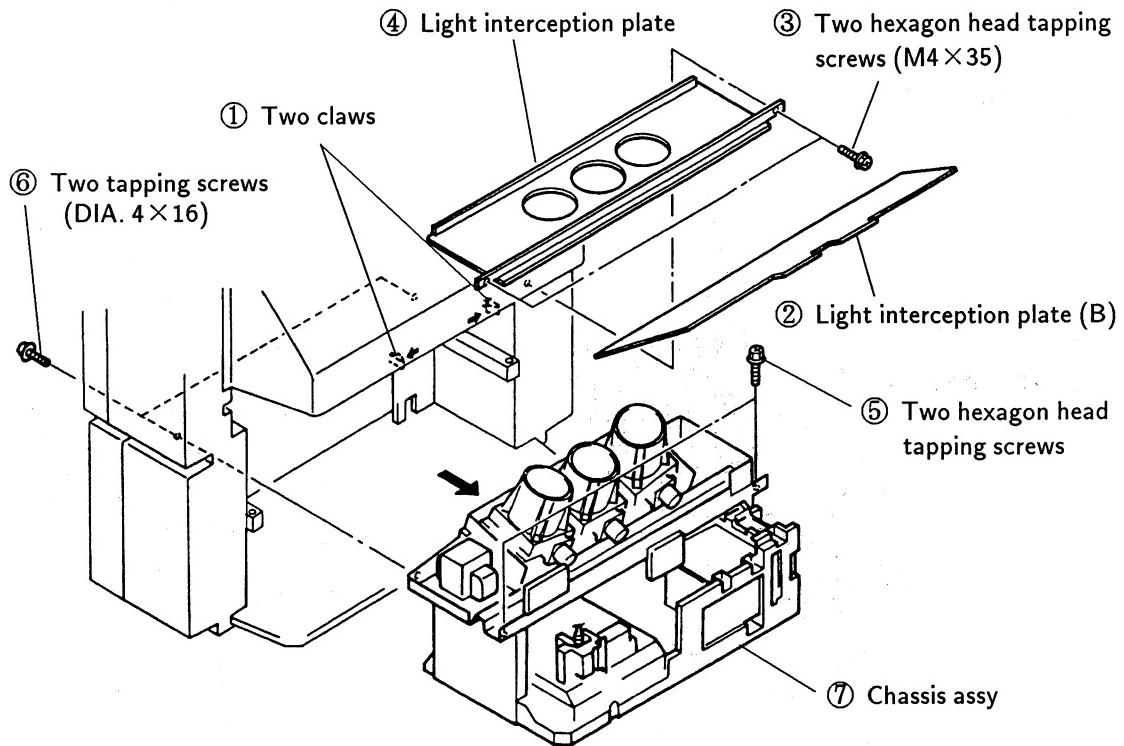


Exterior
Extension cable 4 pin 1-941-891-33
6 pin 1-941-891-31
7 pin 1-941-891-32
18 pin 3-702-558-01
10 pin 3-702-557-01
36 pin connector 3-702-561-01
50 pin connector 3-702-560-01
36/50 pin 3-702-559-01
Extension board

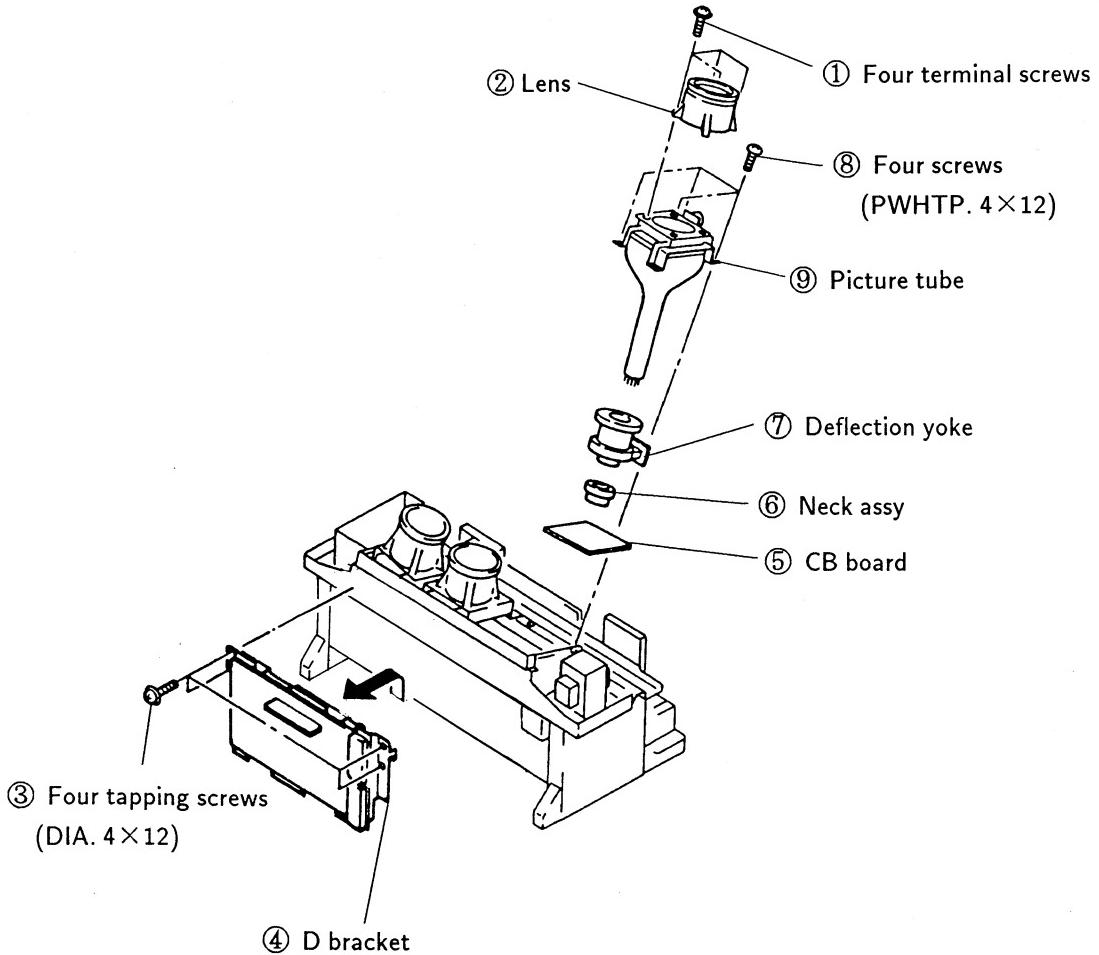
2-15-2. CONNECTOR CABLE



2-16. CHASSIS ASSY REMOVAL

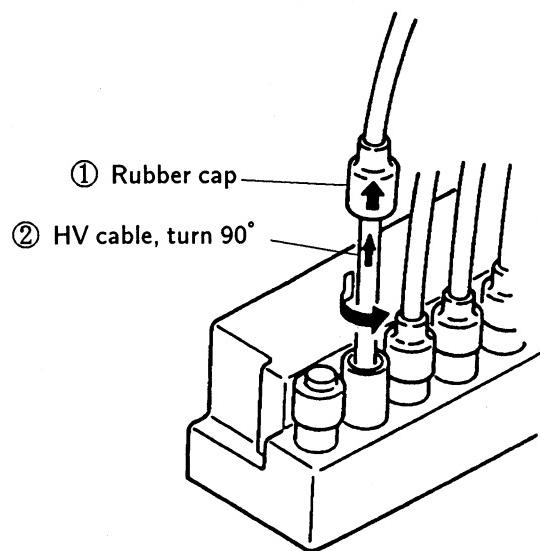


2-17. PICTURE TUBE REMOVAL

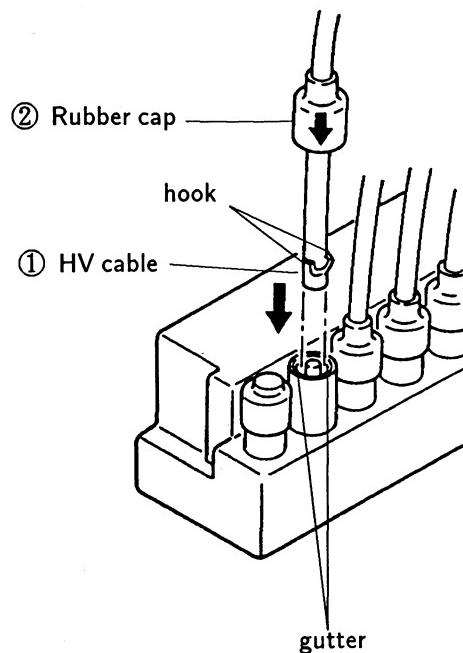


2-18. HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL

(1) Remover



(2) Installation

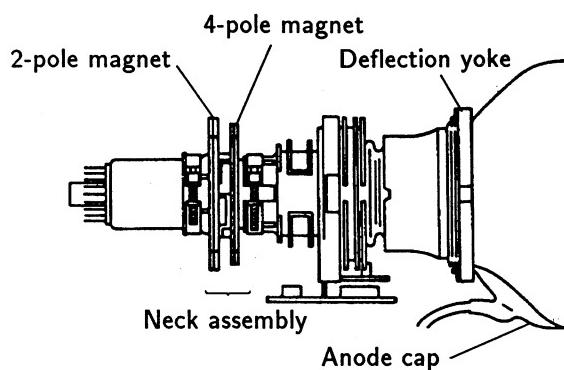


SECTION 3

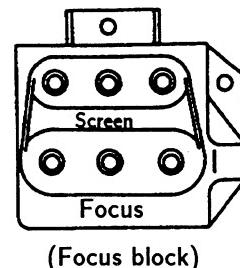
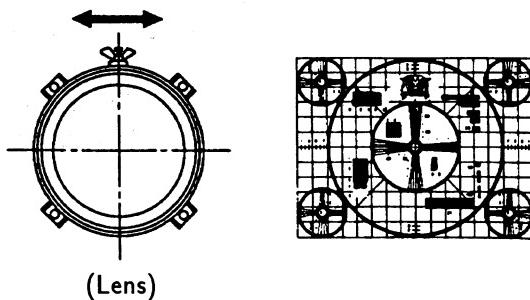
SET-UP ADJUSTMENTS

3-1. FOCUS LENS ADJUSTMENTS

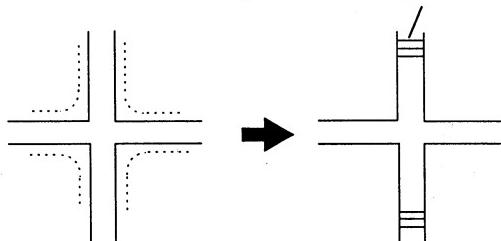
1. Set the D-board registration variable resistors (VR) to mechanical center.
2. Set the centering magnets (for red, green, and blue) to 0 as shown in the figure.



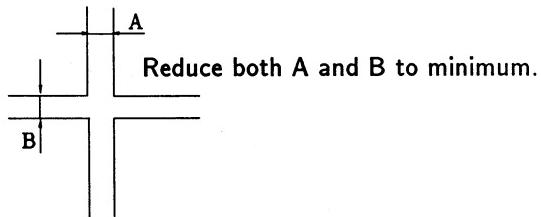
3. Input monoscope signal. Set 50% BRIGHTNESS and minimum PICTURE. Make rough adjustment so that 10IRE of the monoscope signal becomes faintly luminous using the screen VRs.
4. Set PICTURE and BRIGHTNESS maximum. Press the commander menu button. Select CONVERGENCE to display test signal.
5. Enter service mode. Select R OFF of SERVICE MODE to cut off red output. Similarly, select B OFF to cut off blue output.
6. Turn the green lens to eliminate flare of the test signal.



Verify that scanning lines are seen.



7. Turn the green focus VR in the focus block to adjust green focus to reduce both A and B of the test signal to minimum.



8. Repeat above 6 and 7. Couple of times to improve tracking and obtain an optimum focus. Then tighten the green lens screw.
9. Adjust the red and blue focuses similarly.

3-2. DEFLECTION YOKE POSITION ADJUSTMENTS

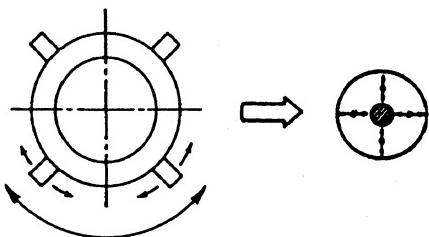
1. Input monoscope signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output. Similarly, select B OFF to cut off blue output.
3. Loosen the deflection yoke (DY) fitting screws. Tilt the DY to obtain the best horizontal and vertical monoscope patterns.
4. After adjustment, press the DY onto the cathode ray tube (CRT) funnel and tighten the screws.
5. Also adjust DY positions for red and blue outputs in the same way.

3-3. 2-POLE MAGNET ADJUSTMENT

1. Input dot signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
Similarly, select B OFF to cut off blue output.
3. Set PICTURE to maximum. Turn the green focus variable resistor (VR) in the focus block counterclockwise from the just focus to brighten the point in the dot.
4. Adjust the 2-pole magnet to position the bright point at the center of the dot.
5. Adjust the red and blue dots in the same way.

* Use the center dot:red and green

Use the vertical center and left end dot :blue

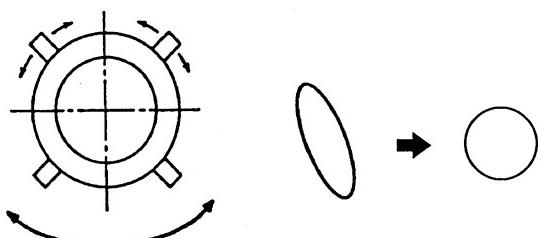


3-4. 4-POLE MAGNET ADJUSTMENT

1. Input dot signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
Similarly, select B OFF to cut off blue output.
3. Set PICTURE to maximum. Turn the green focus variable resistor (VR) in the focus block clockwise (count clockwise:blue) from the just focus until the dot diameter becomes as shown below.
4. Adjust the 2-pole magnet to make the dot perfectly round.
5. Turn the green focus variable resistor to the just focus.
6. Adjust the red and blue dot in the same way.

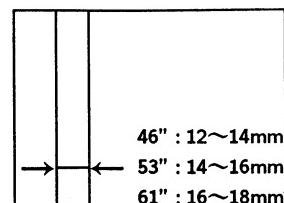
* Use the center dot : red and green

Use the vertical center and left end dot : blue



3-5. DE-FOCUS ADJUSTMENT (BLUE)

1. Input cross hatch signal.
2. Turn the blue focus variable resistor (VR) in the focus block counter clock wise so that the width of the left end vertical line becomes as shown below.

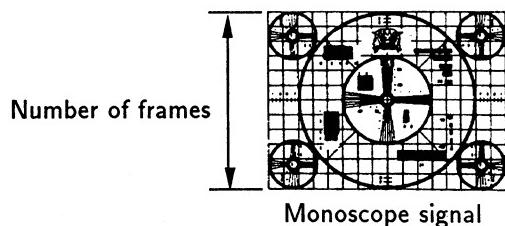


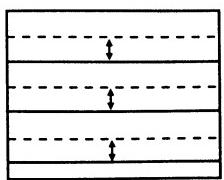
without flare

3-6. GREEN PICTURE ADJUSTMENTS

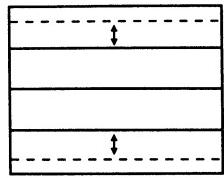
1. Input monoscope signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
Similarly, select B OFF to cut off blue output.
3. Turn RV913 and RV960, the vertical green linearity variable resistors (V.G LIN VRs) on the D-board, to obtain an optimum vertical linearity. Then turn RV911, the vertical green amplitude variable resistor (V.G SIZE VR) to set vertical amplitude to 11.7 frames.

Note: The vertical position indicator of the monoscope signal must be positioned at the center by adjusting RV905, the vertical green center position variable resistor (V.G CENT VR) in advance.

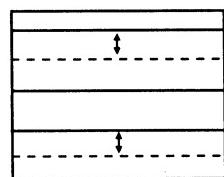




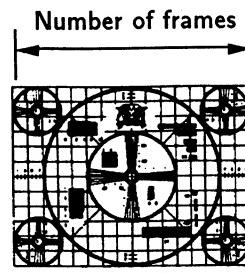
RV905 V.G CENT
(vertical position)



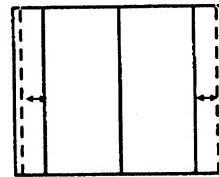
RV911 V.G SIZE
(vertical amplitude)



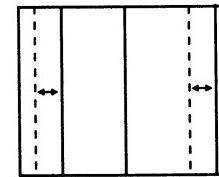
RV913 V.G LIN
(vertical linearity)



Monoscope signal

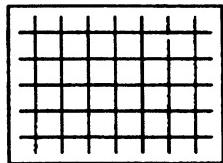


RV908 H.G SIZE
(horizontal position)



RV916 H.G LIN
(horizontal linearity)

5. Verify that the horizontal lines on the top and bottom of cross-hatched area of the monoscope signal are horizontal and linear.



6. Turn RV916, RV964 and RV969, the horizontal green linearity variable resistors (H.G LIN VRs) on the D-board, to obtain an optimum horizontal linearity.

Then turn RV908, the horizontal green amplitude variable resistor (H.G SIZE VR) to set horizontal amplitude to 15.6 frames.

Note: The horizontal position indicator of the monoscope signal must be positioned at the center by adjusting RV902, the horizontal green center position variable resistor (V.G CENT VR) in advance.

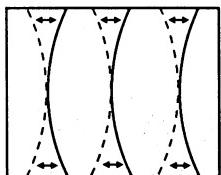
7. Input cross hatch signal.

Turn vertical green (V.G) and horizontal green (H.G) variable resistors (VRs) and make adjustments according to the following steps :

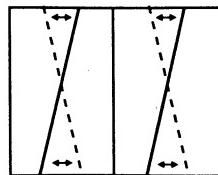
(Adjustment procedure)

1. [BOW] → [SKEW] → [CENT (center position)]
2. [PIN (pin warp)] → [SUB BOW] → [BOW]
3. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
4. [M.WAVE (middle sine wave warp)] →
[WAVE-A (upper and lower sine wave warp)] →
[WAVE-U (upper sine wave warp)]
※ For vertical (V) only.
5. [V-M.PIN (vertical middle pin warp)] →
[V/WING (vertical wing warp)]
※ For vertical (V) only.
6. [H-M.PIN (horizontal middle pin warp)]
※ For horizontal (H) only.

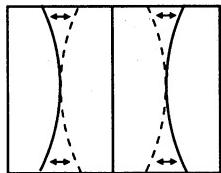
(Dot motion)



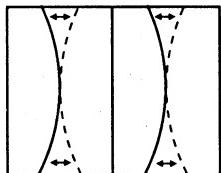
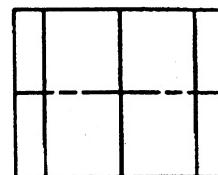
RV932 H.G BOW
(horizontal green bow)



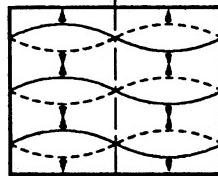
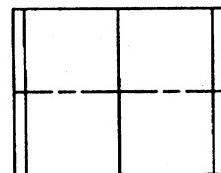
RV944 H.G SUB SKEW
(horizontal green sub skew)



RV941 H.G PIN
(horizontal green pin warp)

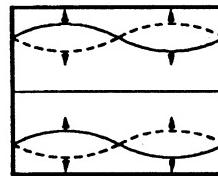


RV950 H.G SUB BOW
(horizontal green sub bow)

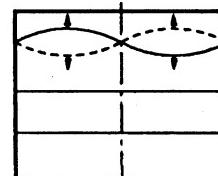


RV962 V-M-WAVE
(vertical middle sine wave warp)

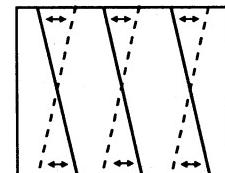
V.G BOW.....RV935
V.G PIN.....RV938
V.G SUB BOW.....RV953



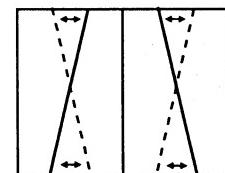
RV975 V-WAVE-A
(vertical upper and lower
sine wave warp)



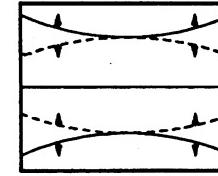
RV978 V-WAVE-U
(vertical upper sine wave warp)



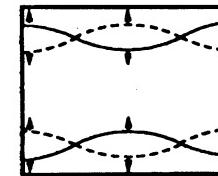
RV920 H.G SKEW
(horizontal green skew)



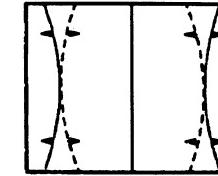
RV925 H.G KEYS
(horizontal green trapezoid)



RV980 V-M. PIN
(vertical middle pin warp)
※ Common in red, green,
and blue



RV957 V/WING
(wing warp)
※ Common in red, green,
and blue



RV956 H/M. PIN
(horizontal middle pin warp)

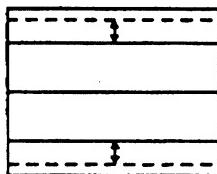
3-7. GREEN AND RED REGISTRATION ADJUSTMENTS

1. Input cross hatch signal.
2. Enter service mode. Select B OFF of SERVICE MODE to cut off blue output.
3. Turn the vertical red (V.R) and horizontal red (H.R) variable resistors (VRs) to adjust red picture convergence in relation to green picture according to the following steps :

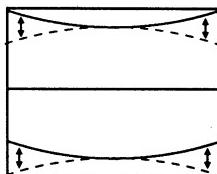
(Adjustment procedure)

1. [LIN (linearity)] → [SIZE (amplitude)] → [CENT (center position)]
2. [BOW] → [SKEW] → [CENT (center position)]
3. [PIN (pin warp)] → [SUB BOW] → [BOW]
[H/M. PIN (horizontal middle pin warp)]
4. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
5. [M.WAVE (middle sine wave warp)] → [WAVE-A (upper and lower sine wave warp)] → [WAVE-U (upper sine wave warp)]

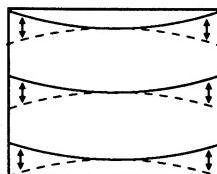
(Dot motion)



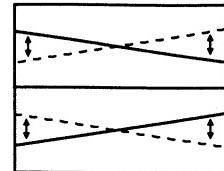
RV912 V.B SIZE
(vertical red amplitude)



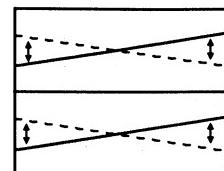
RV952 V.R SUB BOW
(vertical red sub bow)



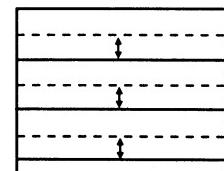
RV943 V.R BOW
(vertical red bow)



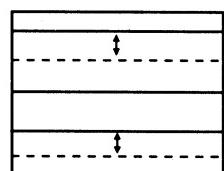
RV928 V.R KEYS
(vertical red trapezoid)



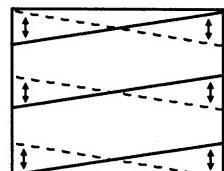
RV946 V.R SUB SKEW
(vertical red sub skew)



RV904 V.R CENT
(vertical red center position)



RV917 V.R LIN
(vertical red linearity)



RV922 V.R SKEW
(vertical red skew)

H.R LIN.....	RV915
H.R SIZE.....	RV907
H.R CENT.....	RV901
H.R BOW.....	RV931
H.R SKEW.....	RV919
H.R PIN.....	RV940
H.R KEYS.....	RV926
H.R SUB BOW.....	RV949
H.R SUB SKEW.....	RV943
V-M-WAVE.....	RV973
V-WAVE-A.....	RV976
V-WAVE-U.....	RV979
V-M.PIN.....	RV980
V/WING.....	RV957
H/M.PIN.....	RV956

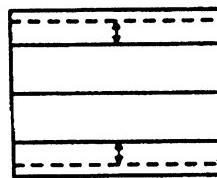
3-8. GREEN AND BLUE REGISTRATION ADJUSTMENTS

1. Input cross hatch signal.
2. Enter service mode. Select R OFF of SERVICE MODE to cut off red output.
3. Turn the vertical blue (V.B) and horizontal blue (H.B) variable resistors (VRs) to adjust blue picture convergence in relation to green picture according to the following steps :

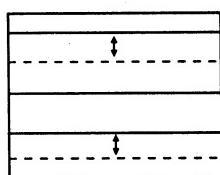
(Adjustment procedure)

1. [LIN (linearity)] → [SIZE (amplitude)] → [CENT (center position)] →
2. [BOW] → [SKEW] → [CENT (center position)]
3. [PIN (pin warp)] → [SUB BOW] → [BOW]
[H/M. PIN (horizontal middle pin warp)]
4. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
5. [M.WAVE (middle sine wave warp)] →
[WAVE-A (upper and lower sine wave warp)] →
[WAVE-U (upper sine wave warp)] →

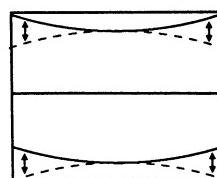
(Dot motion)



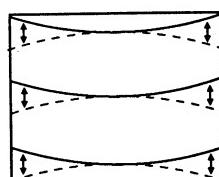
RV912 V.B SIZE
(vertical blue amplitude)



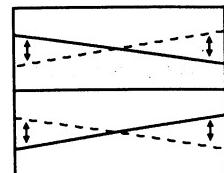
RV918 V.B LIN
(vertical blue linearity)



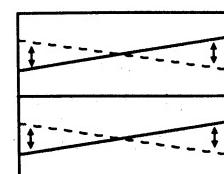
RV954 V.B SUB BOW
(horizontal blue sub bow)



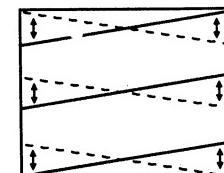
RV936 V.B BOW
(vertical blue bow)



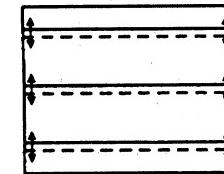
RV930 V.B KEYS
(vertical blue trapezoid)



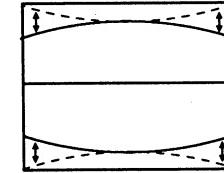
RV948 V.B SUB SKEW
(vertical blue sub skew)



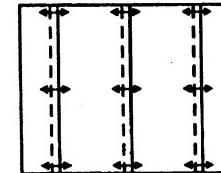
RV924 V.B SKEW
(vertical blue skew)



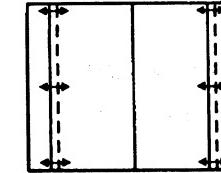
RV906 V.B CENT
(vertical blue center position)



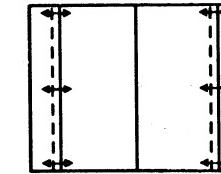
RV939 V.B PIN
(vertical blue pin warp)



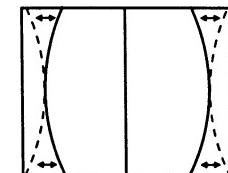
RV903 H.B CENT
(vertical blue center position)



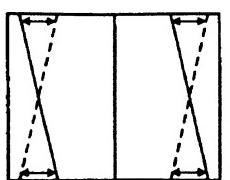
RV909 H.B SIZE
(horizontal blue amplitude)



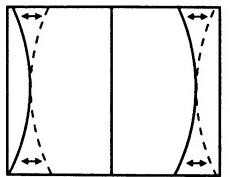
RV914 H.B LIN
(horizontal blue linearity)



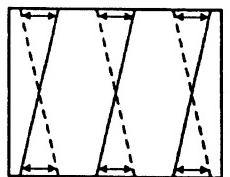
RV942 H.B PIN
(horizontal blue pin warp)



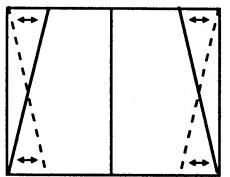
RV954 H.B SUB SKEW
(horizontal blue sub skew)



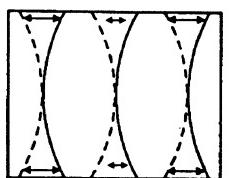
RV951 H.B SUB BOW
(horizontal blue sub bow)



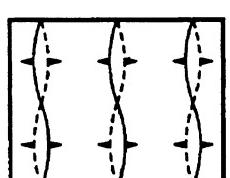
RV921 H.B SKEW
(horizontal blue skew)



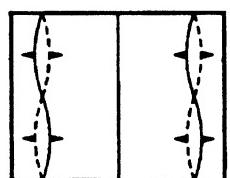
RV927 H.B KEYS
(horizontal blue trapezoid)



RV933 H.B BOW
(horizontal blue bow)



RV981
※ Common in red,
green, and blue



RV982
※ Common in red,
green, and blue

H/M PIN.....RV958

M.WAVE.....RV961

WAVE-A.....RV974

WAVE-U.....RV977

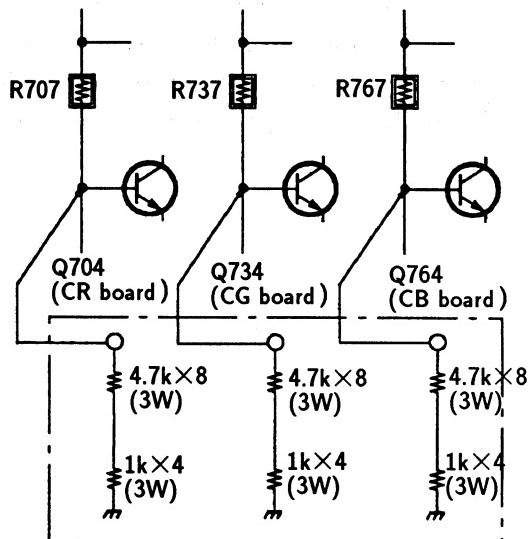
3-9. REGISTRATION CHECK

1. Out put red, blue, and green.
2. Out put cross hatch and monoscope signals to check registration. Also check focus.

3-10. WHITE BALANCE ADJUSTMENTS

1) Screen adjustment

1. Input white signal.
2. Remove connectors CR-15, CG-16, and CB-17.
3. Fit jigs between the ground and R707, R737, and R767.



※ Resistors in each jig are connected serial.

4. Turn the RGB (red, green, and blue) screen variable resistors in the focus block to make the flyback line faint. Stop before the line completely disappears.
5. Insert connectors CR-15, CG-16, and CB-17.

**2) White balance adjustments (SBRT, GAMP, BAMP,
GCUT, BCUT)**

1. Input monoscope signal and enter service mode.
2. Select the picture quality adjustment from the menu and set PICTURE minimum.
3. Use the commander to adjust SBRT so that 10 IRE of the monoscope pattern becomes faintly luminous.
4. Input white signal.
5. Set PICTURE minimum. Adjust item GCUT and BCUT to obtain an optimum white balance.
6. Set PICTURE maximum. Adjust GAMP and BAMP to obtain an optimum white balance.
7. Repeat white balance adjustment alternating PICTURE setting at the minimum and maximum.

MEMO

SECTION 4

SAFETY RELATED ADJUSTMENTS

4-1. SAFETY RELATED ADJUSTMENTS

When replacing the following components, make the HV REGULATOR adjustments (on the N board)

- HV block, IC803, IC805, D805, D807, C817, C818, C821, C836, C837, R824, R825, R827, R828, R834, R835, R836, R864, R865, R866, R902

When replacing the following components, make the HV HOLD DOWN adjustments (on the N board)

- HV block, IC803, IC804, Q804, D806, D808, C809, C819, C820, C822, C823, C850, R807, R826, R829, R832, R833, R837, R838, R839, R840, R841, R892, R893, R900, R901

When replacing the following components, make the BEAM CURRENT PROTECTOR adjustments (on the N board)

- ① IC802, Q805, Q807, D811, D812, C810, C824, C825, C826, C827, C831, R810, R843, R844, R847, R848, R849, R850, R851, R852, R853, R854, R881
- ② IC804, Q804, Q808, D808, D809, C809, C828, C829, C830, C831, R807, R839, R840, R841, R847, R848, R849, R850, R851, R852, R855, R856, R857, R881

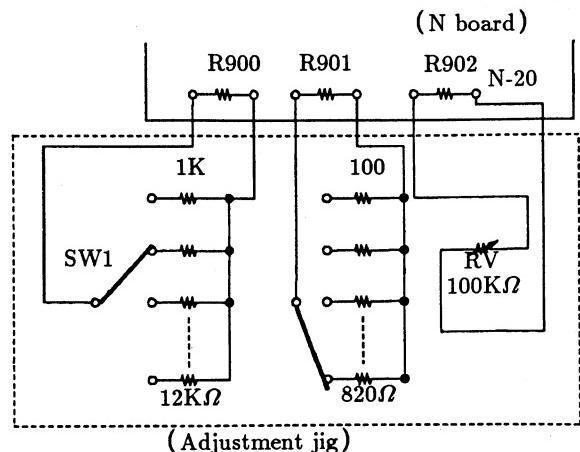
When replacing the following components, make the OVP CIRCUIT adjustments (on the G board)

- Q618, Q621, D628, C634, R639, R649, R652, R655, R656

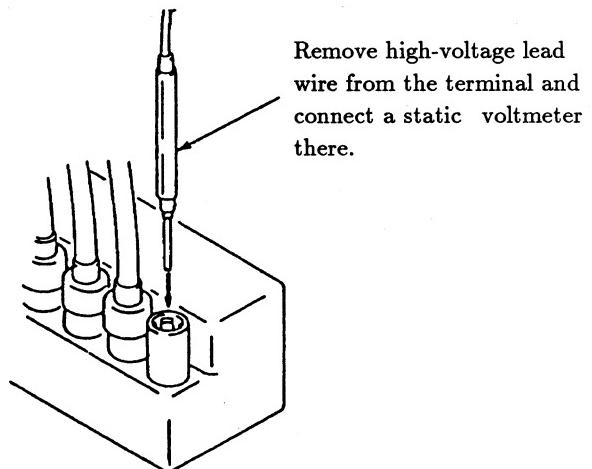
— Checking with static voltmeter —

HV HOLD DOWN ADJUSTMENTS (█R900, R901)

1. Verify that the power switch is off.
2. Connect the HV hold down adjustment resistance jig to the N20 connector on the N board.



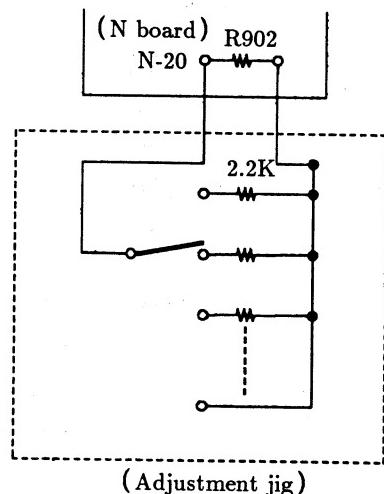
3. Connect an external variable resistor (RV) to R902 of the N board.
4. Remove the cap off from the unused terminal of the high voltage block. Connect a static voltmeter to the terminal.



5. Receive 120 VAC power voltage and monoscope pattern signal. Maximize PICTURE and BRIGHTNESS.
6. Use the external variable resistor of the hold down adjustment jig to make the static voltmeter to read $33.50 \pm 0.50\text{kVDC}$.
7. Raise resistances with the jig until the HV hold down circuit is activated. Read the figures then, and mount resistance of the measured figures to R900 and R901.
R900 : Must be $1\text{k}\Omega$ to $12\text{k}\Omega$
R901 : Must be $J_w 100\Omega$ to 820Ω
8. Turn on power again. Vary external variable resistance and confirm that the HV hold down circuit is activated at the reated value, $33.50 \pm 0.50\text{kV}$.

HV REGULATOR ADJUSTMENTS (R902)

1. Connect the HV adjustment resistance jig to R902 of the N board.



2. Remove the red anode lead wire for the CRT tube from the high-voltage block and connect the static voltmeter instead.
3. Receive 120 VAC power voltage and monoscope pattern signal. Set PICTURE and BRIGHTNESS to the standard.
4. Turn on power. To adjust the resistance of R902 with the adjustment jig to read the rated value, $31.50 \pm 0.50\text{kV}$.
5. Receive all-white signal. Set BRIGHTNESS to the standard. Maximize PICTURE. Confirm that the rated value, $31.50 \pm 0.50\text{kV}$ is read.
6. Cut off RGB by R OFF, G OFF, B OFF of the service commander. Verify that the rated value, $31.50 \pm 0.50\text{kV}$, is read.

+B VOLTAGE CONFIRMATION

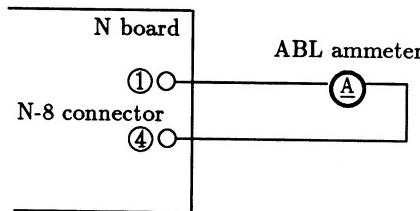
1. Receive 120 ± 1 VAC power voltage and monoscope pattern signal. Set BRIGHTNESS to standard and maximize PICTURE.
2. Connect a digital multimeter between the 115V line and the ground on the G board, and confirm that the rated value, $115.0 \pm 5\text{V}$ is read.

CHECKING THE OVP (overvoltage protection) CIRCUIT (R652)

1. Receive 120 VAC power voltage and monoscope pattern signal. Maximize PICTURE and BRIGHTNESS.
2. Remove R638 from the G board and connect a variable resistor (4.7 to $10\text{k}\Omega$) instead.
3. Turn the variable resistor of $10\text{k}\Omega$ and confirm that the OVP circuit is activated and luster disappears when +B voltage reads the rated value, 125.0 ± 5.0 VDC.

BEAM CURRENT PROTECTOR CHECK (R852)

1. Receive 120 VAC power voltage and monoscope pattern signal. Maximize BRIGHTNESS.
2. Connect pin① and pin② of the N-21 connector. (on the N board)
3. Remove the jumper connector from the N-8 connector on the N board. Then connect an ABL ammeter between pin ① and pin ④ of the N-8 connector.



4. Raise PICTURE current gradually. Confirm that the beam current protector circuit is activated and luster disappears under the rated value, $3400 \mu\text{A}$.
5. Connect pin③ and pin② of the N-21 connector. Verify that the protector circuit is activated and luster disappears similarly.

CHECKING AFTER REPLACING IC601

1. When replacing IC601, check the +B voltage.

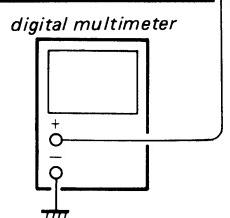
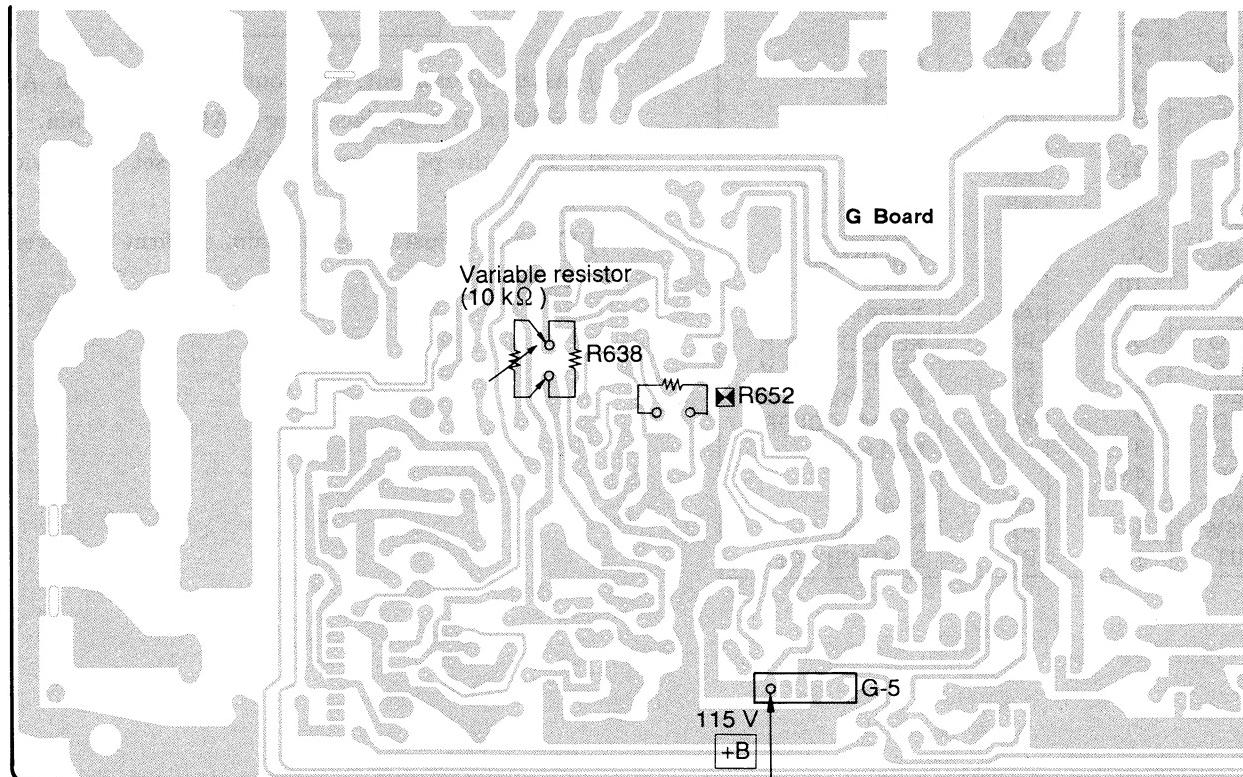
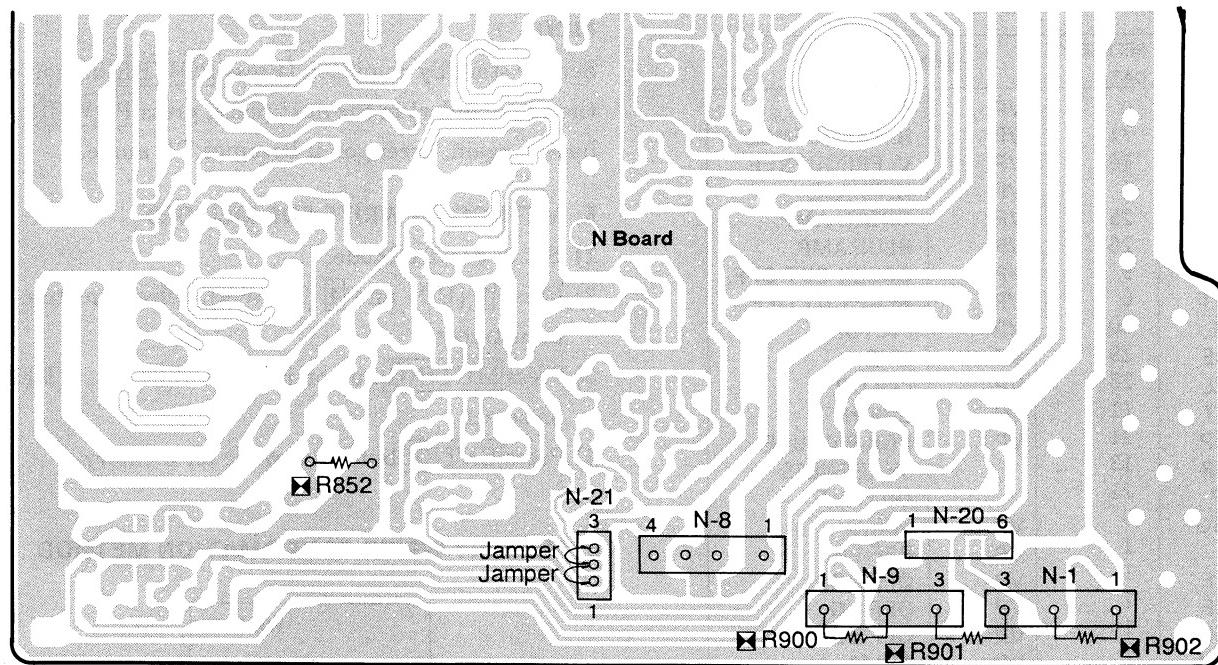
— C

HV H

1. Re
2. Re
3. Re
4. Ca
5. T
6. A
7. R

R
R
re
N

R
R
M
cc
p
9. V
H
tu



— Checking without static voltmeter —

HV HOLD DOWN ADJUSTMENT (█R900, █R901)

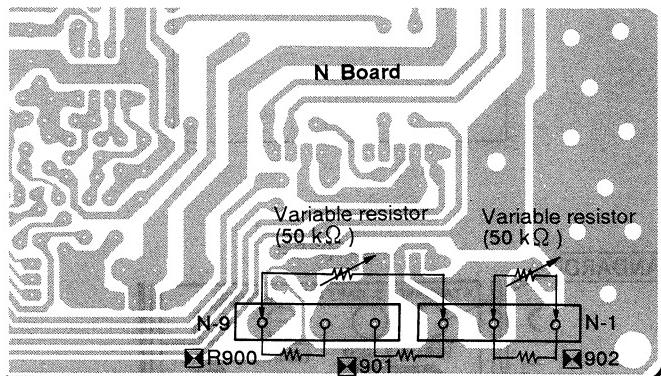
1. Receive all-white signal. Maximize PICTURE and BRIGHTNESS.
2. Remove R902 from the N board. Connect a variable resistor of $50k\Omega$ on each end, and minimize the resistance.
3. Remove R900 and R901 from the N board. Connect a variable resistor of $50k\Omega$ on each end, and minimize the resistance.
4. Connect a digital voltmeter between the D801 cathode and chassis ground of the N board.
5. Turn on the power switch. Adjust the variable resistors connected to the R902 of the N board to make the digital multimeter to read 145.0VDC.
6. Adjust the variable resistors connected to R900 and R901 on the N board so as to activate the HV hold down circuit and turn off the display.
7. Read the variable resistors connected to R900 and R901 and mount fixed resistors of measured resistance to the terminals.

Note : Select fixed resistance from the following ranges.

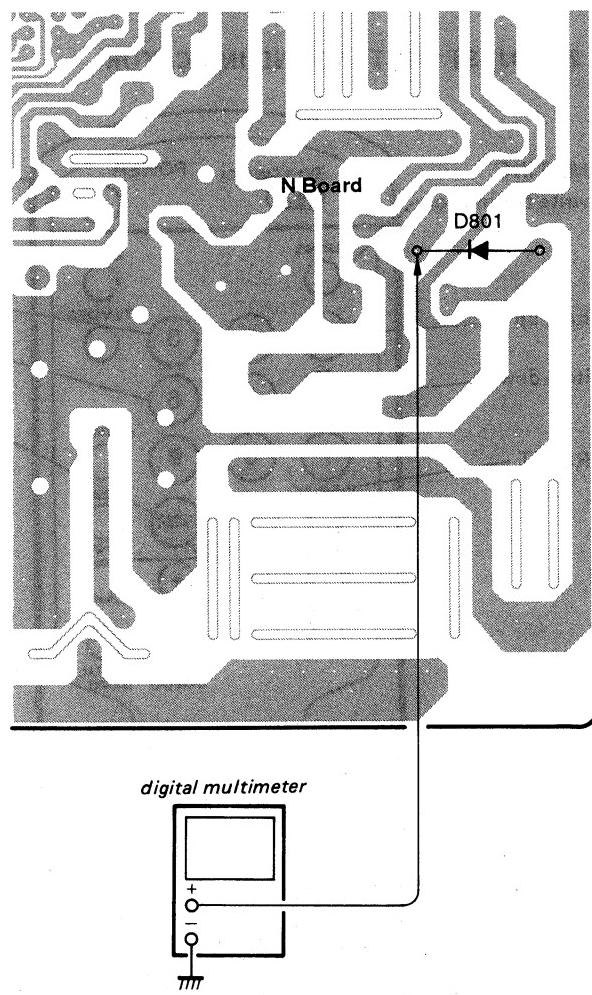
R900 : $1k\Omega$ to $12k\Omega$

R901 : Jw 100Ω to 820Ω

8. Maximize resistance of the variable resistor connected to R902 of the N board and turn on power.
9. Vary variable resistance at R902. Confirm that the HV hold down circuit is activated and the display is turned off when voltage reads $134 \pm 1.0V$.

**HV REGULATOR ADJUSTMENT (█R902)**

1. Receive all-white signal. Maximize PICTURE and BRIGHTNESS.
 2. Connect a variable resistor of $50k\Omega$ on each end of R902 of the N board. Maximize resistance.
 3. Connect a digital voltmeter between the D801 cathode and the chassis of the N board.
 4. Turn on power. Adjust the variable resistor so that the digital multimeter reads $135.0V \pm 1.0V$.
 5. Read the variable resistance then.
 6. Mount a fixed resistor of the measured resistance to R902.
- Note : R902 : Must be $2.2k\Omega$ to $27k\Omega$
7. Turn on power again. Confirm that the digital multimeter reads $135.0V \pm 1.0V$.



SECTION 5 CIRCUIT ADJUSTMENTS

5-1. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

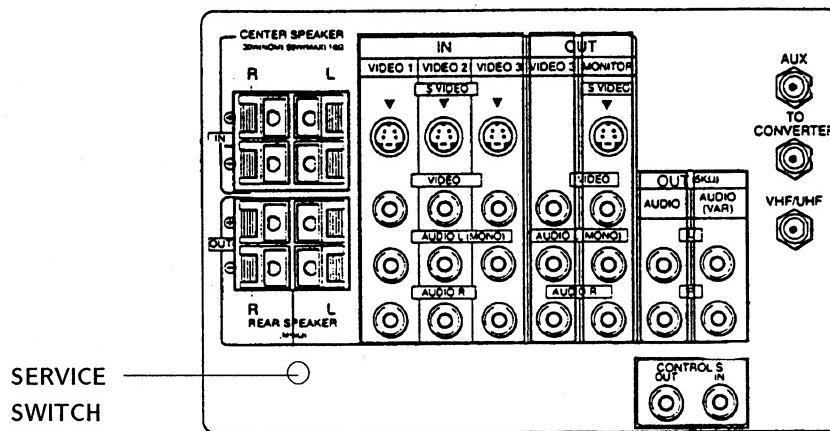
Use of Remote Commander (RM-Y114A) can be performed circuit adjustments about this model.

1. METHOD OF SETTING THE SERVICE MODE

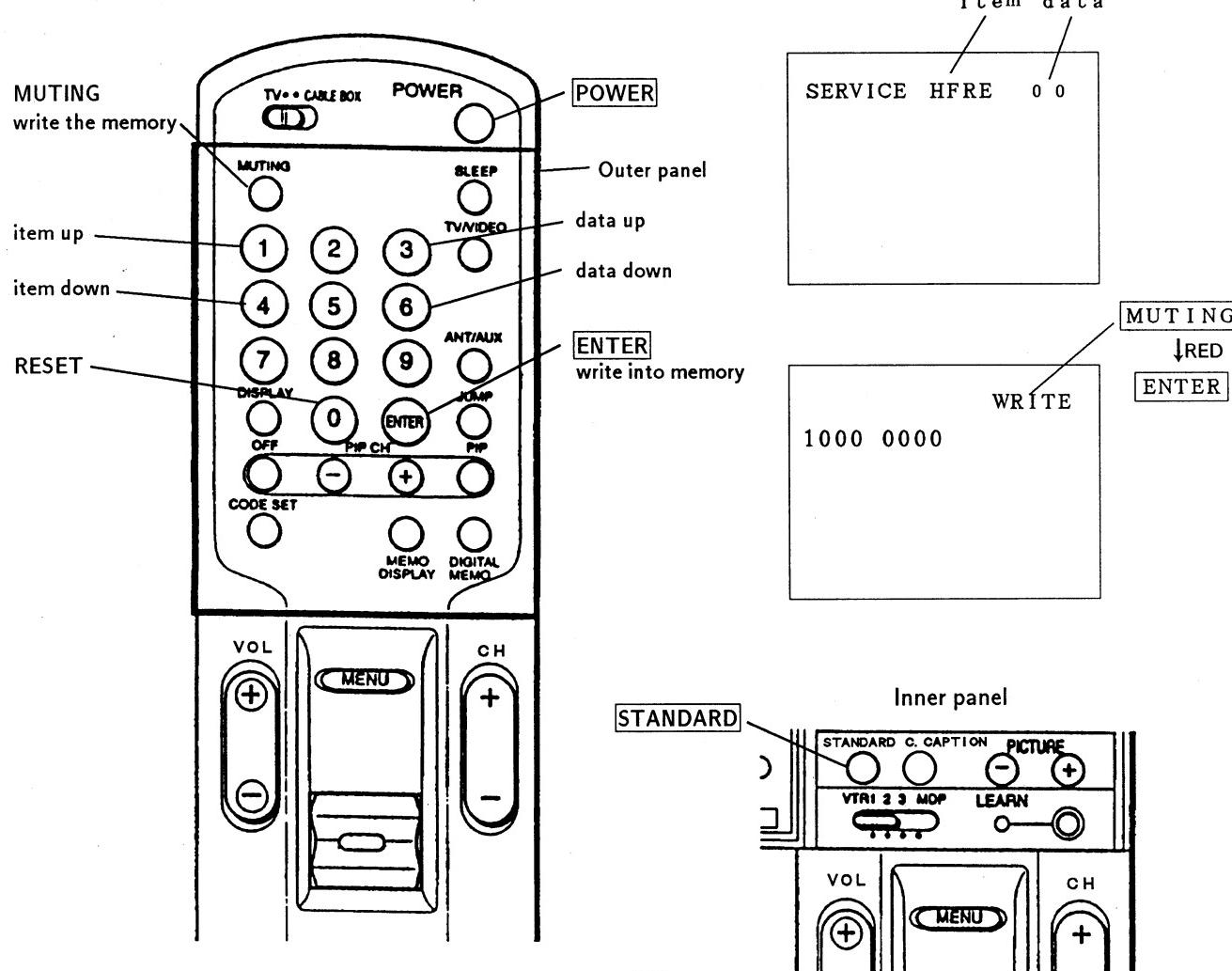
- 1) Press **POWER** button on the Remote Commander while pressing switch on the rear of the set.

NOTE : Test Equipment Required.

1. Pattern Generator
2. Frequency counter
3. Digital multimeter
4. Audio OSC



2. ADJUST BUTTONS AND INDICATOR



3. AN ITEM OF ADJUSTMENT

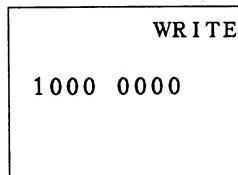
ITEM	REFERENCE DATA	NAME REGIST	
AFC	0	VP	AFC 1.0
HFRE	74	VP	H. FREQUENCE
VFRE	16	VP	V. FREQUENCE
HPOS	5	VP	H. PHASE
GAMP	25	VP	GREEN AMP.
BAMP	26	VP	BLUE AMP.
GCUT	9	VP	GREEN CUT OFF.
BCUT	6	VP	BLUE CUT OFF
SPIX	40	VP	PICTURE
SHUE	29	VP	HUE
SCOL	28	VP	COLOR
SBRT	11	VP	BRIGHT
RGBP	21	VP	RGB PICTURE
SHAR	13		SHARPNESS
DISP	21		OUTPUT
VSMO	0	VP	VSMO
REF	1	VP	REF 1.0
ROFF	1	VP	OFF NR
GOFF	1	VP	OFF NG
BOFF	1	VP	OFF NB
ABLM	1	VP	ABLM
DRGB	0	VP	D RGB
TEST	0	AP	T
MPX	7	AP	ATT
FILO	31	AP	I1
DEEM	7	AP	I2
STEV	31	AP	OSC 1
SAPV	31	AP	OSC 2
PILO	7	AP	PILOT
SEP	31	AP	WIDE BAND
VD	7	AP	SPECTRAL
LVOL	0	AP	VOLUME-L
RVOL	0	AP	VOLUME-R
BASS	10	AP	BASS
TRE	8	AP	TREBLE
PHPO	32	PI	READ DELAY H
PVPO	8	PI	READ DELAY V
PLEV	6	PI	PICTURE LEVEL
PFCO	7	PI	FRAME COLOR
NRLE	31		NR LEVEL
DSPP	43		
SHAD	1	PJ	SHADON
VMSW	1	PJ	RS HAD
SCUT	16	PJ	SHAD CUT OFF

4. METHOD OF CANCELLATION FROM SERVICE**MODE**

Set the standby condition (Press **POWER** button on the commander) in the next place, press **POWER** button again, hereupon it becomes TV mode.

5. METHOD OF WRITE FOR MEMORY

- 1) Set to Service Mode.
- 2) Press **[1]** (UP) and **[4]** (DOWN), select an item of adjustments.
- 3) Press **MUTING** button indicate WRITE (RED) on screen.
- 4) Press **ENTER** button to write for memory.

6. MEMORY WRITE CONFIRMATION METHOD

- 1) After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
- 2) Turn the power switch ON and set to Service Mode.
- 3) Call the adjusted items again, confirm they were adjusted.

5-2. A BOARD ADJUSTMENTS

RF AGC ADJUSTMENT(IF BLOCK VR)

- 1) Input a color-bar signal.
- 2) Adjust AGC VR of TU 101 so that snow noise and cross-modulation disappear from the picture.
- 3) Confirm them at every channel.

H.FREQUENCY ADJUSTMENT (HFRE)

- 1) Set to Service Mode.
- 2) Input a color-bar signal.
- 3) Connect a frequency counter to pin③ of A-10 connector.
- 4) Call the item of AFC, set to 3 level (free run).
- 5) Select HFRE with **1** and **4**.
- 6) Adjust **3** and **6** to the 15735 ± 60 Hz level.
- 7) Call the item of AFC again, adjust the level "01".
- 8) Write into the memory by pressing **MUTING** → then **ENTER**.

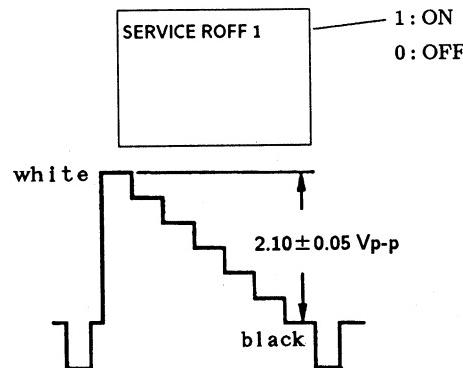
V.FREQUENCY ADJUSTMENT (VFRE)

- 1) Set the Service Mode.
- 2) Input an off-air signal (VIDEO IN → no signal).
- 3) Connect the frequency counter across connector ⑬pin of E 1-1 connector and ground.
- 4) Select VFRE with **1** and **4**.
- 5) Adjust **3** and **6** to the 56 ± 0.5 Hz.
- 6) Write the memory by pressing **MUTING** → then **ENTER**.

SUB CONTRAST ADJUSTMENT (SPIX)

- 1) Set to Service Mode.
- 2) Input a color-bar signal. (75 IRE)
- 3) Set the conditions as follows.

PICTURE	..... MAX
COLOR	..... MIN
BRIGHTNESS	..... MIN
TRINITONE	..... LOW
R OFF	..... ON
G OFF	..... OFF
B OFF	..... OFF

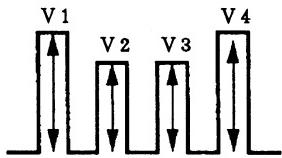


- 4) Connect an oscilloscope to ⑩pin of E1-1 connector on A board and ground.
- 5) Adjust **3** and **6** to the 2.10 ± 0.05 Vp-p level by selecting SPIX with **1** and **4**.
- 6) Write the memory by pressing **MUTING** → then **ENTER**.
- 7) Return the following back to normal after adjustment.

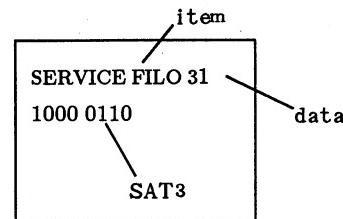
G OFF	..... ON
B OFF	..... ON
COLOR	..... CENTER
BRIGHTNESS	..... CENTER
TRINITONE	..... HIGH
PICTURE	..... 80%

SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)

- 1) Input a color-bar signal.
- 2) Press **STANDARD** to normal.
- 3) Set to Service Mode.
- 4) Connect an oscilloscope to pin② of E1-1 connector on A board and ground.
- 5) Adjust **3** and **4** to the V1=V4 and V2=V3 by select to SHUE and SCOL with **1** and **4**. Lower the data 4 steps from this point.



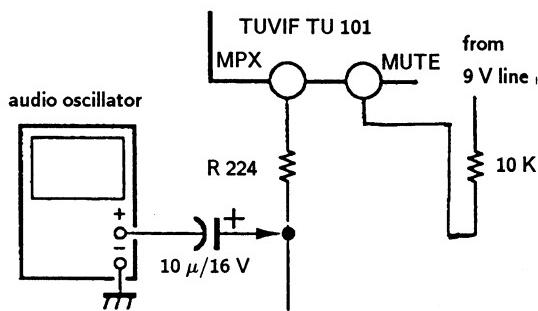
- 4) Make the data "00" by selecting FILO with **1** and **4** And then, send up the data gradually by pressing **6**. Set the data to D1 before SAT3 changing to 1 from 0.
- 5) Send up the data gradually. Set data D2 when SAT3 changes 0 from 1.
- 6) Adjust the data of FILO to $\frac{D_1 + D_2}{2}$.
- 7) Write into the memory by pressing **MUTING** → then **ENTER**.



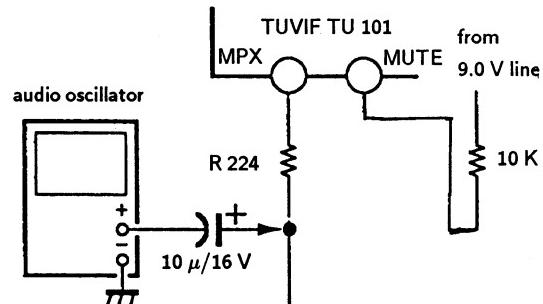
- 6) Write into the memory by pressing **MUTING** → then **ENTER**.

FILTER ADJUSTMENT (MPX, FILO)

- 1) Set to Service Mode.
 - 2) Select to **TEST** with **1** and **4**, set the data to "1". Then select MPX and change data to "8".
 - 3) Connect an audio oscillator to R 224 using a capacitor (10μ F/16V), set frequency to 62.936 kHz ± 0.1 kHz.
- And then, through the 10kΩ resistor, feed 9.0V into the mute of TUVIF TU 101.

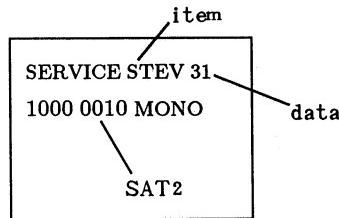


V 4 fh : SINE-WAVE 62.936 KHz ± 0.1 KHz
LEVEL 3.0 Vp-p



Vfh : SINE-WAVE 15.734 KHz ± 0.1 KHz
LEVEL 0.28 Vp-p

- 5) Select STEV with [1] and [4], set the data to "00" with [6]. And then, send up the data gradually. Set the data to D1 before SAT2 changes from 0 to 1.
- 6) Send up data gradually, set the data to D2 when SAT2 changes 1 from 0.
- 7) Adjust the data of STEV to (D 1+D 2)/2.
- 8) Write into the memory by pressing **MUTING** → then **ENTER**.



SEPARATION ADJUSTMENT (SEP)

- 1) Set to Service Mode.
- 2) Press **MTS** to MAIN and receive a monoral broadcast signal.
- 3) Select SEP and VD with [1] and [4], adjust [3] and [6] so that a clear stereo sound is effected.

In the next step, receive a stereo broadcast signal.

MPX IN LEVEL ADJUSTMENT (MPX)

- 1) Set to Service Mode.
- 2) Select TEST with [1] and [4], set the data to "0" with [6]. And then press **MTS** to MONO.
- 3) Select MPX with [1] and [4], set the data to "8" with [3] and [6].
- 4) Write into the memory by pressing **MUTING** → then **ENTER**.

PILOT CANCEL ADJUSTMENT (PILO)

- 1) Set to the Service Mode.
- 2) Select PILO with [1] and [4], set the data to "8" with [3] and [6].
- 3) Write into the memory by pressing **MUTING** → then **ENTER**.

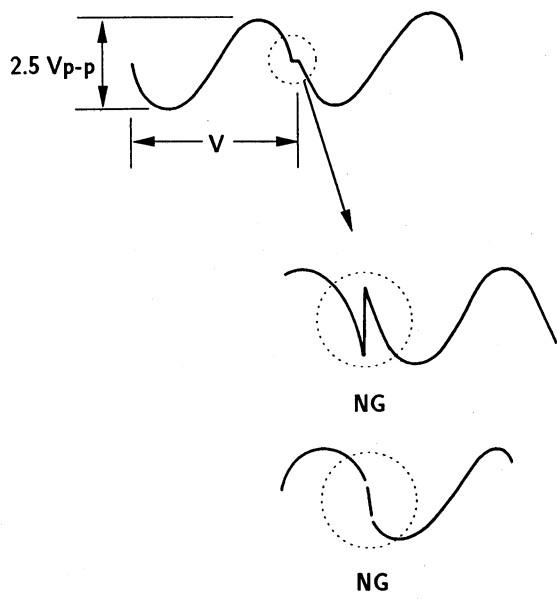
SAP VCO f₀ ADJUSTMENT (SAPV)

- 1) Set to Service Mode.
- 2) Input a stereo broadcast signal with SAP.
- 3) Select TEST with [1] and [4], set the data to "0". And then, press **MTS** to MAIN.
- 4) Connect a digital multimeter to TP-1(DBX). This voltage reading will equal V 1.
- 5) Press MTS to SAP and this voltage will equal V 2.
- 6) Select SAPV with [1] and [4], adjust [3] and [6] so that V 2=V 1±0.03 VDC.
- 7) Write the memory by **MUTING** → **ENTER**.

5-3. DS BOARD ADJUSTMENTS

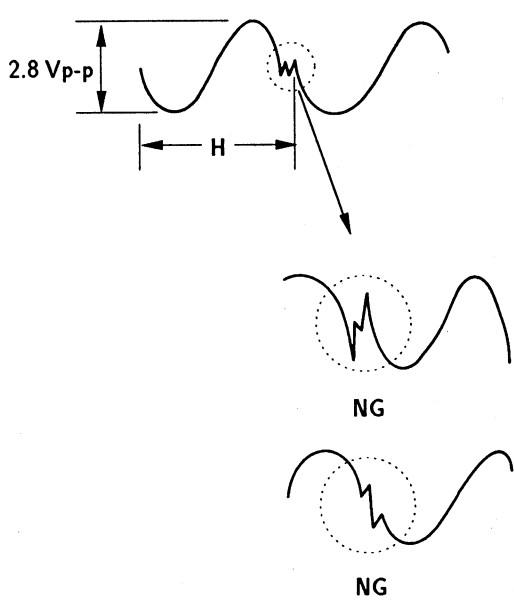
V. 3 WAVE ADJUSTMENT (RV983)

- 1) Input a color-bar signal.
- 2) Connect an oscilloscope IC1712 Pin⑦ of DS board ground.
- 3) Adjust RV983 as shown the following figure.

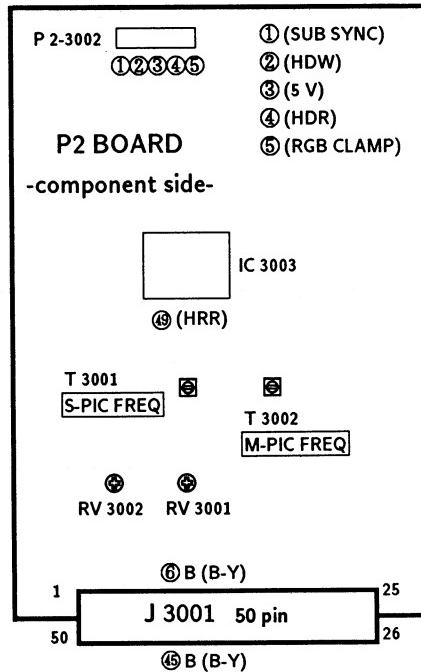


H. 3 WAVE ADJUSTMENT (RV984)

- 1) Input a color-bar signal.
- 2) Connect an oscilloscope IC1712 Pin① of DS board ground.
- 3) Adjust RV984 as shown the following figure.



5-4. P2 BOARD ADJUSTMENTS



MAIN-PICTURE FREQUENCY (T 3002)

- 1) Set PIP mode.
- 2) Connect a frequency counter to Pin 11 (HDW) of J 3001.
- 3) Connect a frequency counter to Pin ⑨ or ⑩ (HRR) of IC 3003 or Pin 5 (RGB CLAMP) of P 2-3002.
- 4) Short the circuit between Pin 4 (HDR) of P 2-3002 and Pin 3 (5 V) of P 2-3002.
- 5) Turn T 3002 CLK (P) for the following frequency at Pin ⑨ or ⑩ (HRR) of IC 3003 or at Pin 5 (RGB CLAMP) of P 2-3002.

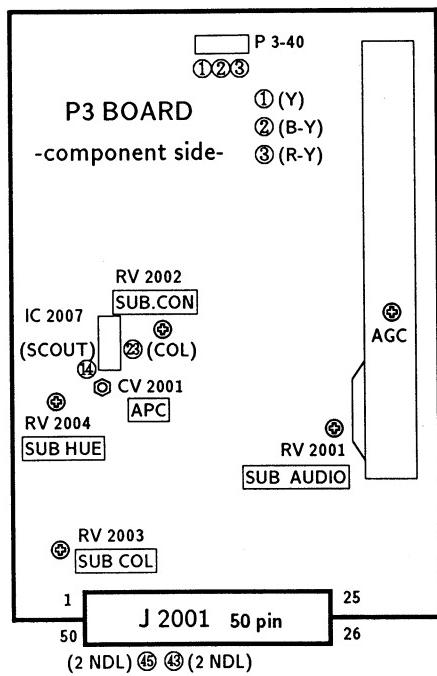
$15.734 \text{ kHz} \pm 10 \text{ Hz}$

SUB-PICTURE FREQUENCY (T 3001)

- 1) Set PIP mode.
- 2) Connect a frequency counter to Pin 11 (HDW) of J 3001.
- 3) Connect a frequency counter to Pin ⑨ or ⑩ (HRR) of IC 3003 or Pin 5 (RGB CLAMP) of P 2-3002.
- 4) Short the circuit between Pin 1 (SUB SYNC) of P 2-3002 and Pin 3 (5 V) of P 2-3002.
- 5) Turn T 3001 CLK (C) for the following frequency at Pin 2 (HDW) of P 2-3002.

$15.734 \text{ kHz} \pm 10 \text{ Hz}$

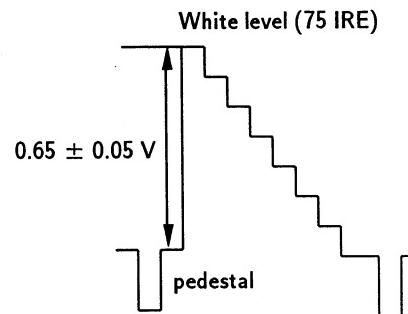
5-5. P3 BOARD ADJUSTMENTS



SUB CONT ADJUSTMENT (RV2002)

- 1) Obtain the color bar signal on the sub-screen.
- 2) Obsene at Pin 1 (Y OUT) of P3-42 on an oscilloscope. Odjust RV2002 for the following lenel between the white level and pedestal one.

$0.65 \pm 0.05 \text{ Vp-p}$



SUB COLOR ADJUSTMENT(RV 2003)

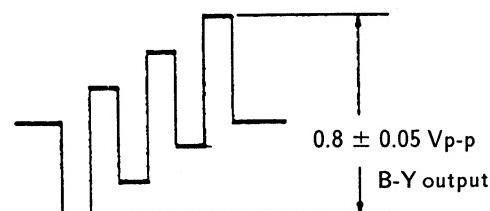
- 1) Obtain the color bar signal on the sub-screen in the mode of PIP size 1/4.
- 2) Reset color.
- 3) Adjust RV 2003 for the following level, obseruing an oscilloscope connected to Pin 2 (B-Y) of P3-40 (Fig. 1)

$0.8 \pm 0.05 \text{ Vp-p} (\text{B-Y})$

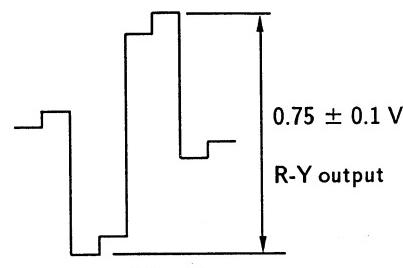
- 4) Adjust RV 2003 for the following level, obseruing an oscilloscope connected to Pin 3 (R-Y) of P3-40 (Fig. 2)

$0.75 \pm 0.1 \text{ Vp-p} (\text{R-Y})$

- 5) Adjust traxking between sub color and sub hue.



(Fig. 1)

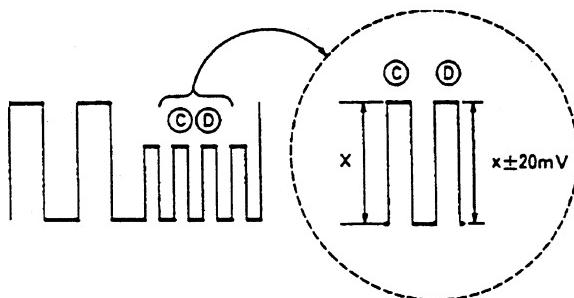


(Fig. 2)

SUB HUE ADJUSTMENT(RV 2004)

- 1) Obtain the color bar signal on the sub-screen in the mode of PIP size 1/4.
- 2) Reset hue.
- 3) Observe the signal at Pin 6 or Pin 45 of J 3001 on P 2 board on an oscilloscope and make adjustment to obtain the following level.

D : X ± 20 mV



APC ADJUSTMENT(CV 2001)

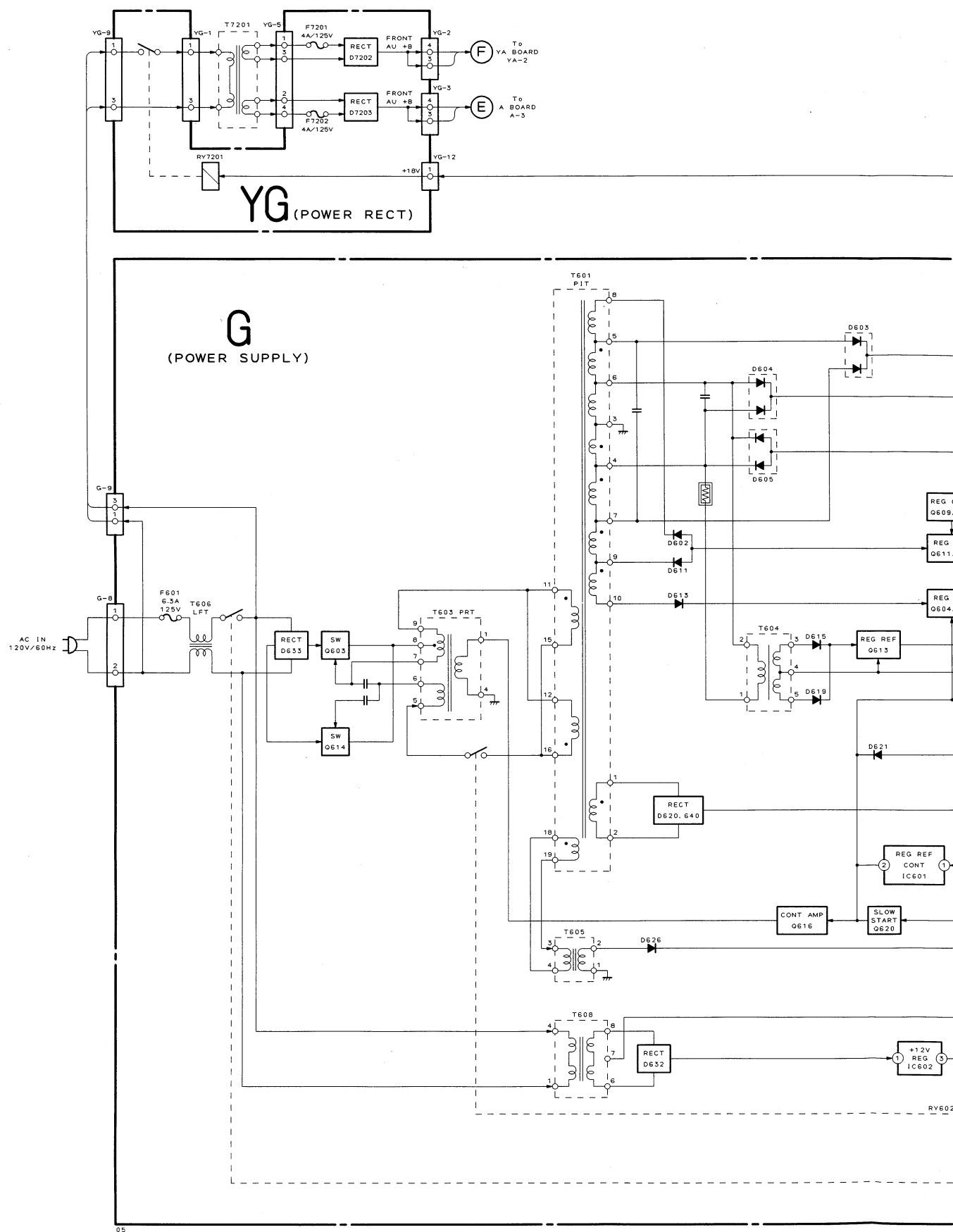
Connect Pin ② (COL) of IC 2007 to ground and connect a frequency counter to Pin ⑭ (SCOUT) to obtain the following level.

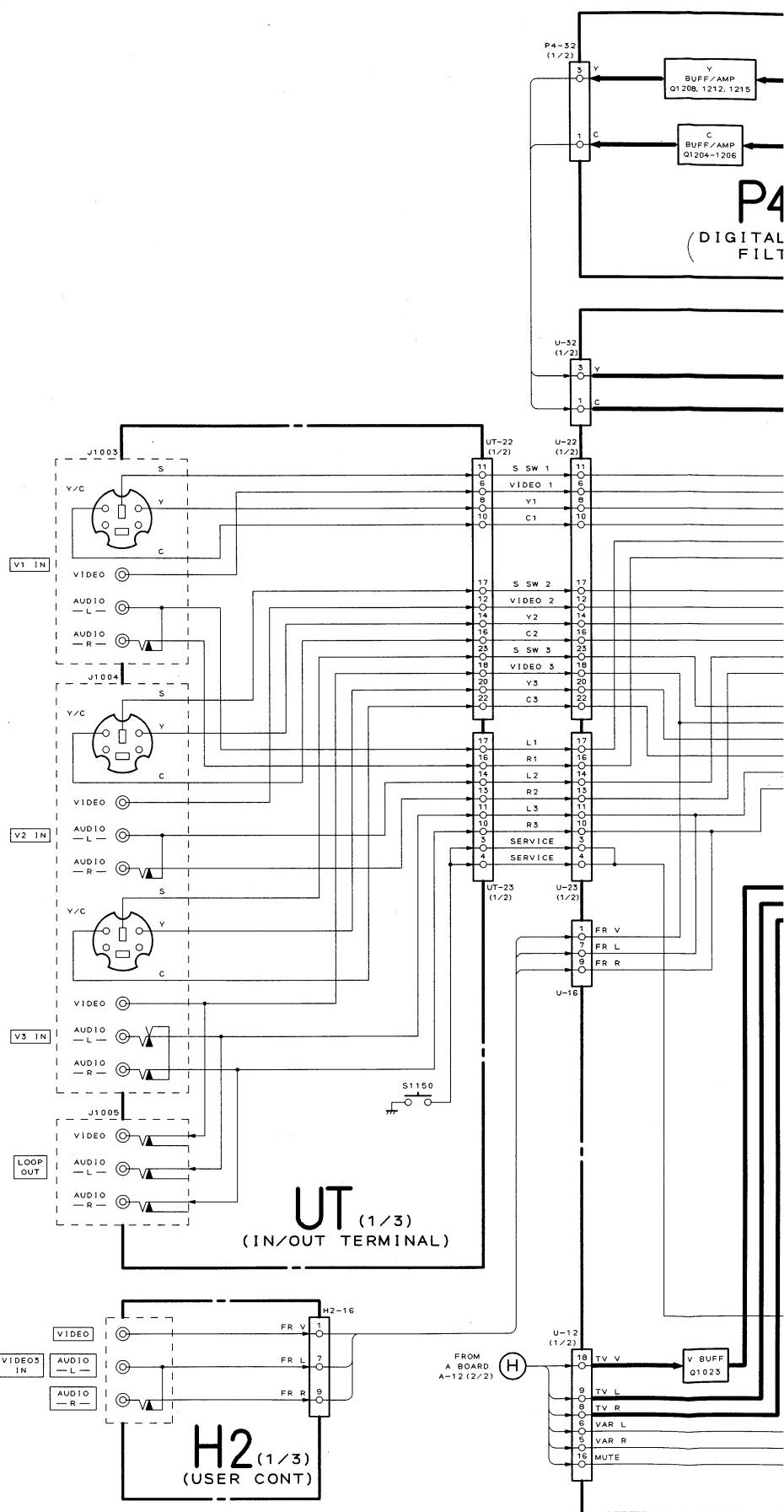
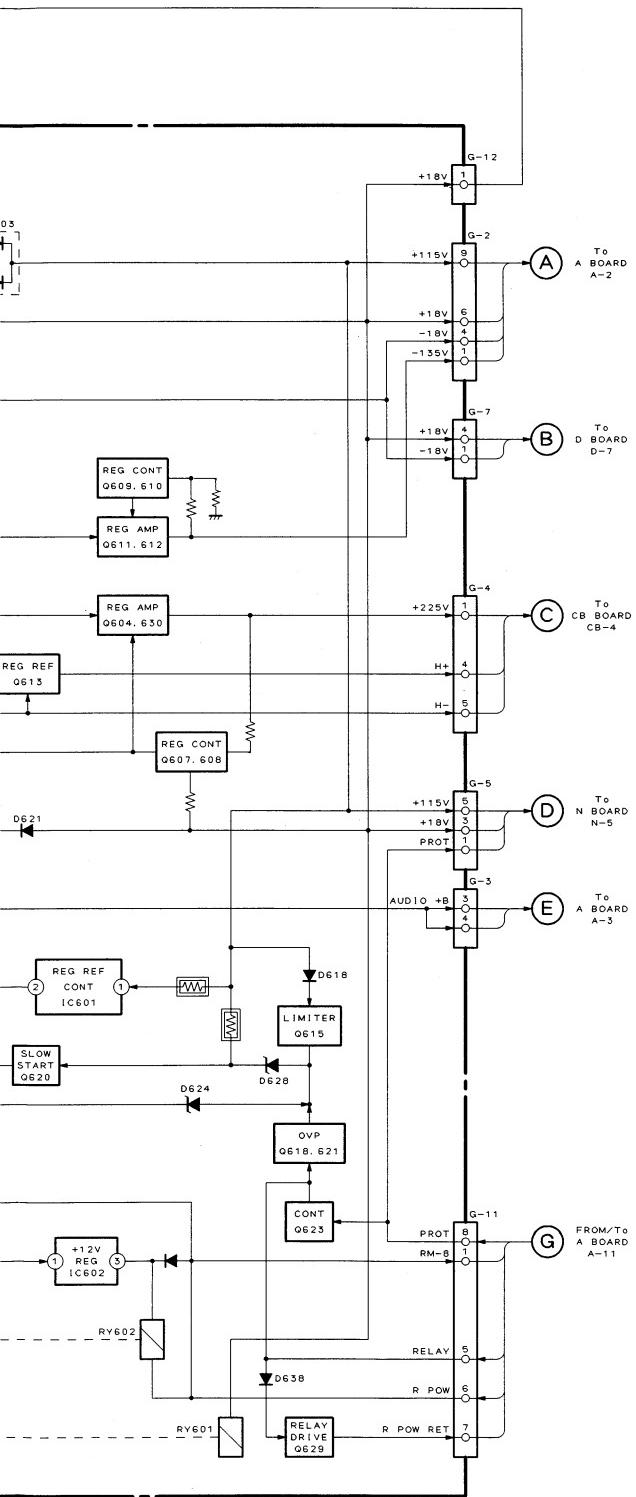
3579545 ± 40 Hz

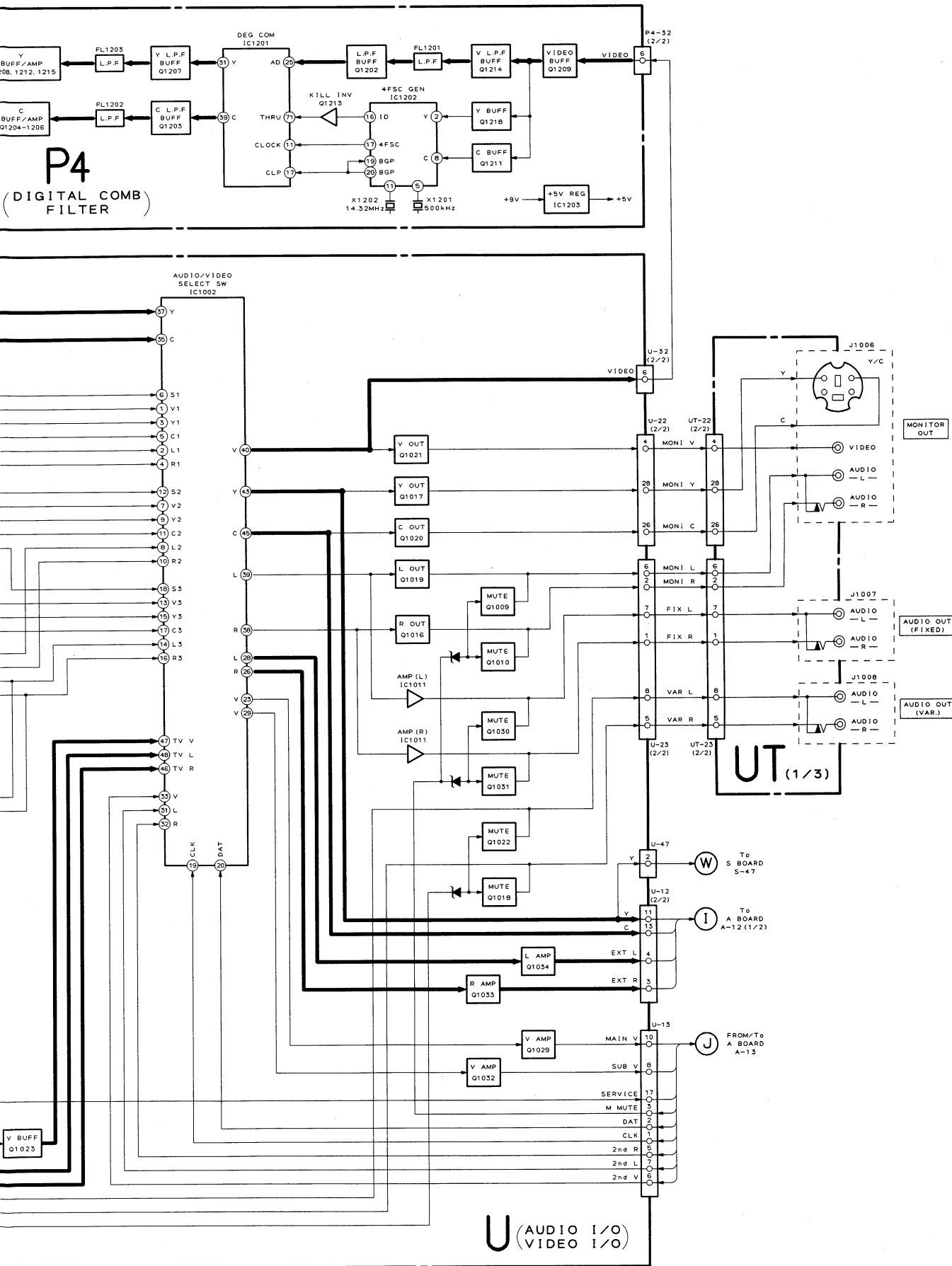
SECTION 6

DIAGRAMS

6-1. BLOCK DIAGRAM (1)

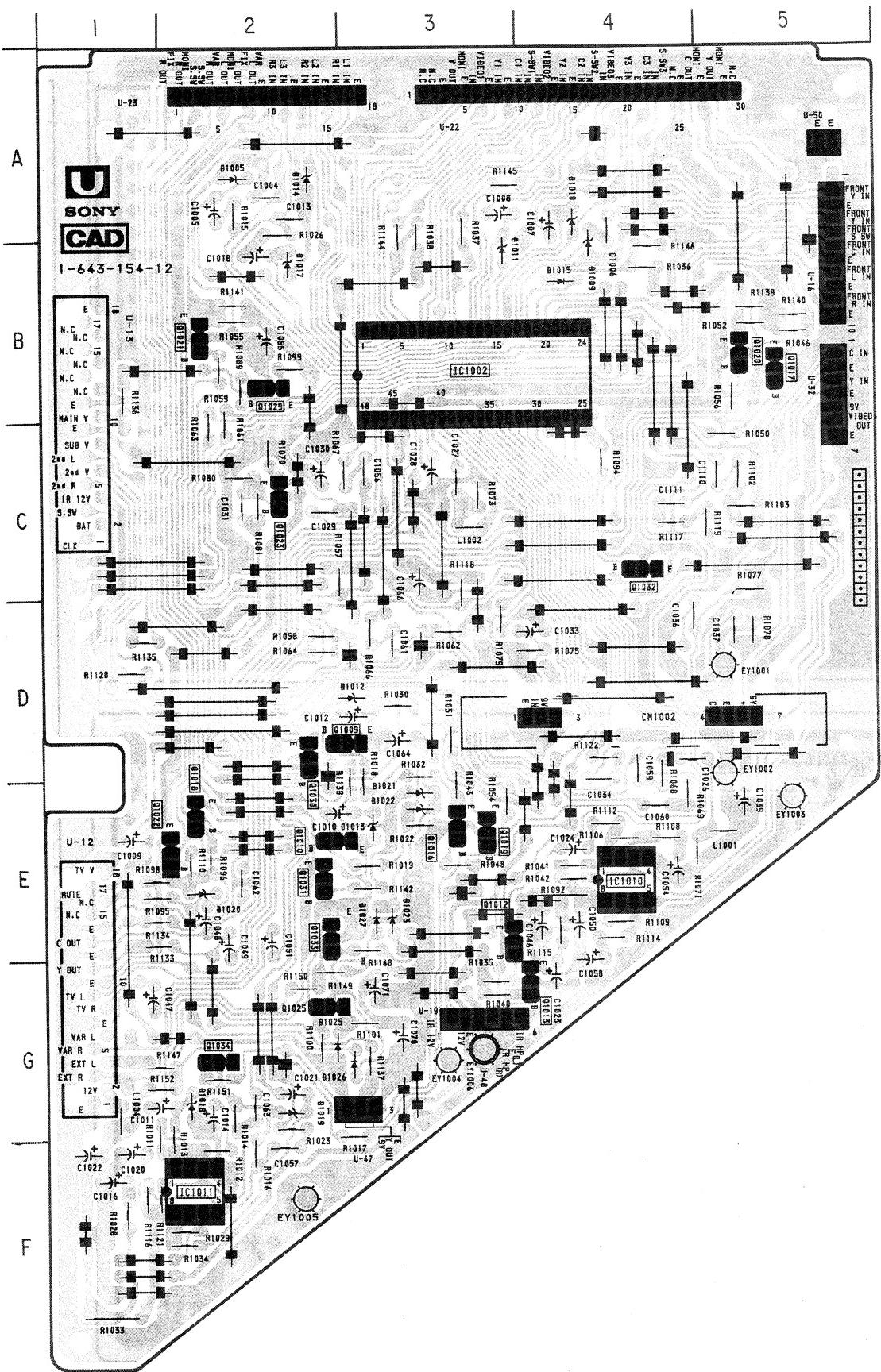






U [AUDIO IN/OUT,
VIDEO IN/OUT]

- U Board -

**U Board**

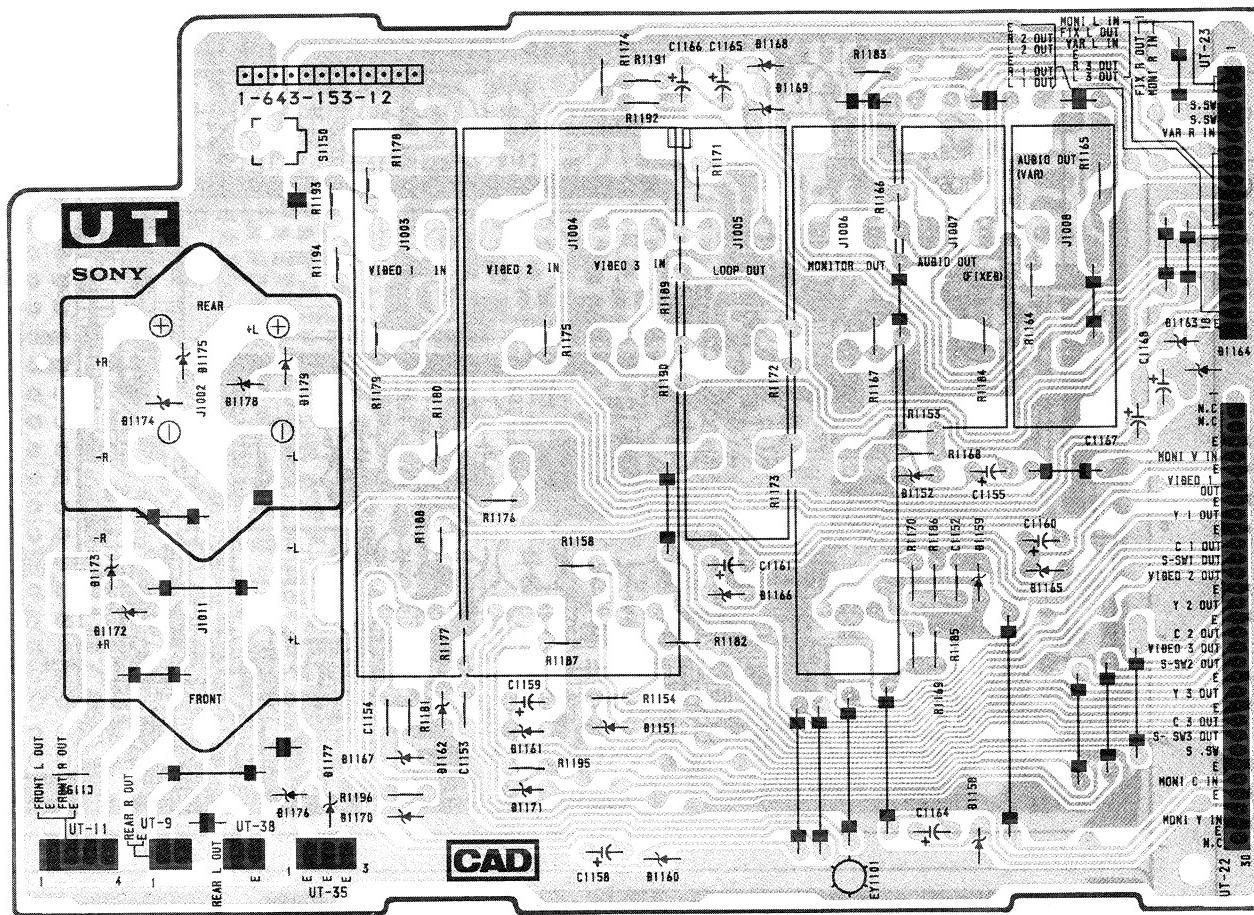
IC
IC1002 B-3
IC1011 F-2
CM1002
IC1010 D-5
IC1011 G-2
IC1010 E-2
IC1011 E-3
IC1010 B-5
IC1011 B-5
IC1018 E-2
IC1019 E-3
IC1020 B-5
IC1021 B-2
IC1022 E-1
Q1023 C-2
Q1029 B-2
Q1030 D-2
Q1031 E-2
Q1032 C-4
Q1033 E-2
Q1034 G-2

TRANSISTOR
Q1009 D-2
Q1010 E-2
Q1016 E-3
Q1017 B-5
Q1018 E-2
Q1019 E-3
Q1020 B-5
Q1021 B-2
Q1022 E-1
Q1023 C-2
Q1029 B-2
Q1030 D-2
Q1031 E-2
Q1032 C-4
Q1033 E-2
Q1034 G-2

DIODE
D1005 A-2
D1009 B-4
D1010 A-4
D1011 B-3
D1012 D-3
D1013 E-3
D1017 B-2
D1018 G-2
D1019 G-2
D1020 E-2
D1021 E-3
D1022 E-3

UT IN/OUT TERMINAL
SP. TERMINAL

- UT Board -

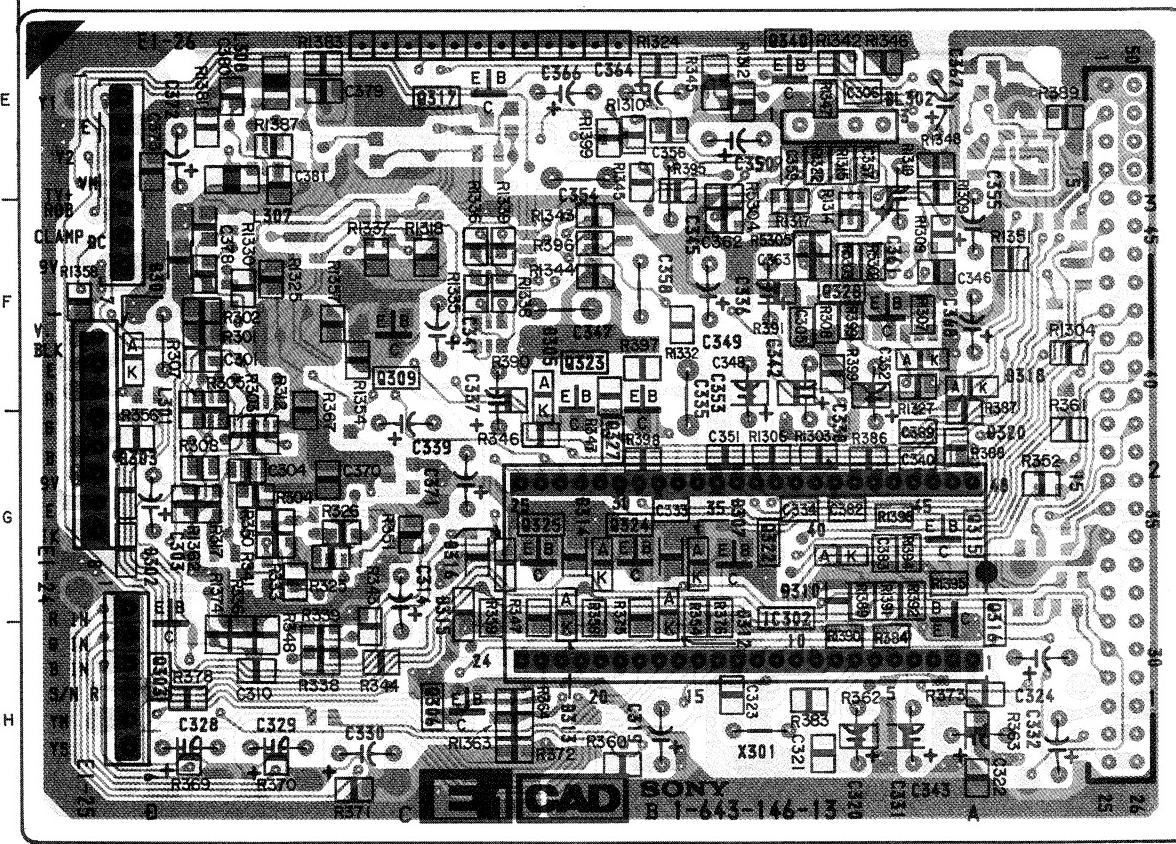
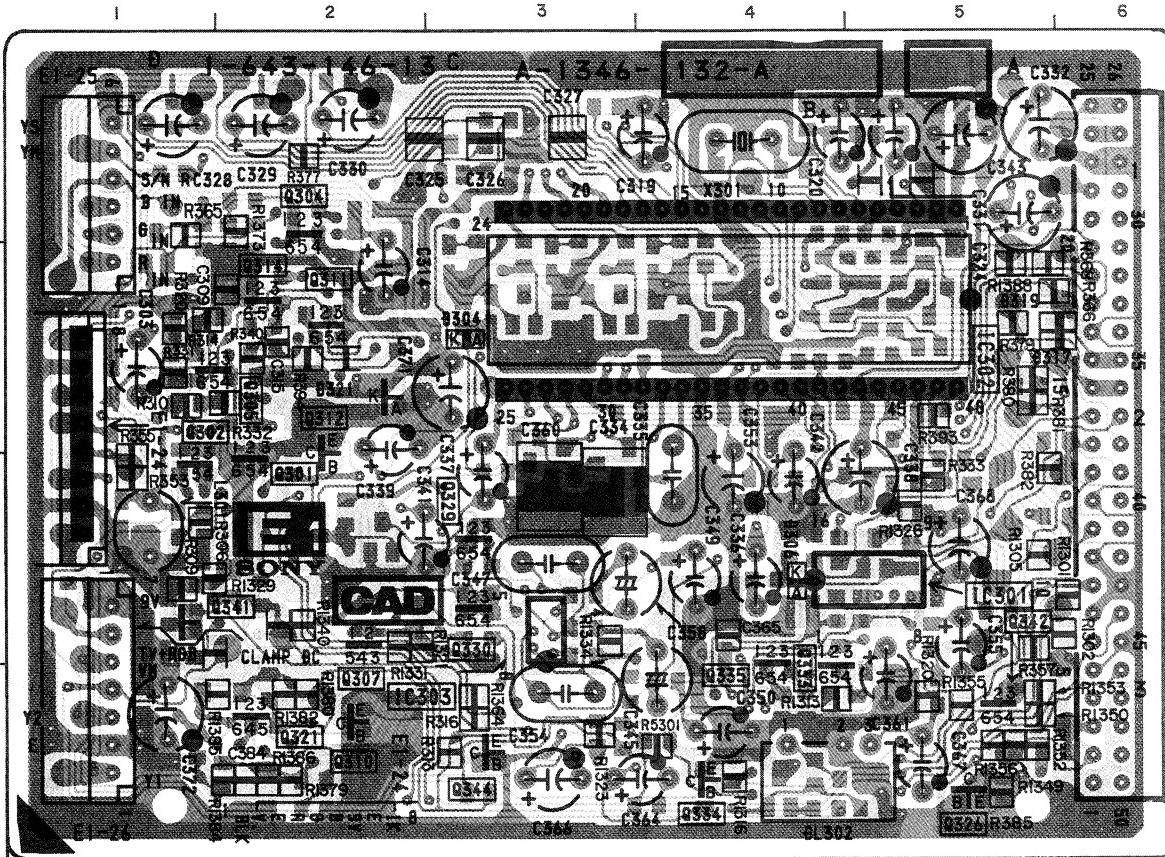


E1 [Y/C JUNGLE]

- E1 Board -

E1 Board

	IC
IC301	C-5
IC302	B-4, G-4
IC303	C-3
TRANSISTOR	
Q301	C-2
Q302	C-1
Q303	G-1
Q304	A-2
Q305	B-1
Q306	H-3
Q307	C-2
Q309	F-2
Q310	D-2
Q311	B-2
Q312	B-2
Q314	B-2
Q315	G-5
Q316	G-5
Q317	E-3
Q321	D-2
Q322	G-4
Q323	F-3
Q324	G-3
Q325	G-3
Q326	D-5
Q327	G-3
Q328	F-5
Q329	C-3
Q330	C-3
Q333	D-4
Q334	D-4
Q335	D-4
Q340	E-4
Q342	D-5
Q344	D-3
DIODE	
D301	F-1
D302	G-1
D303	G-1
D304	B-3
D305	F-3
D306	C-4
D307	G-4
D310	G-4
D312	G-4
D313	G-3
D314	G-3
D315	G-2
D316	G-3
D317	B-5
D318	F-5
D319	B-5
D320	G-5
D321	B-2

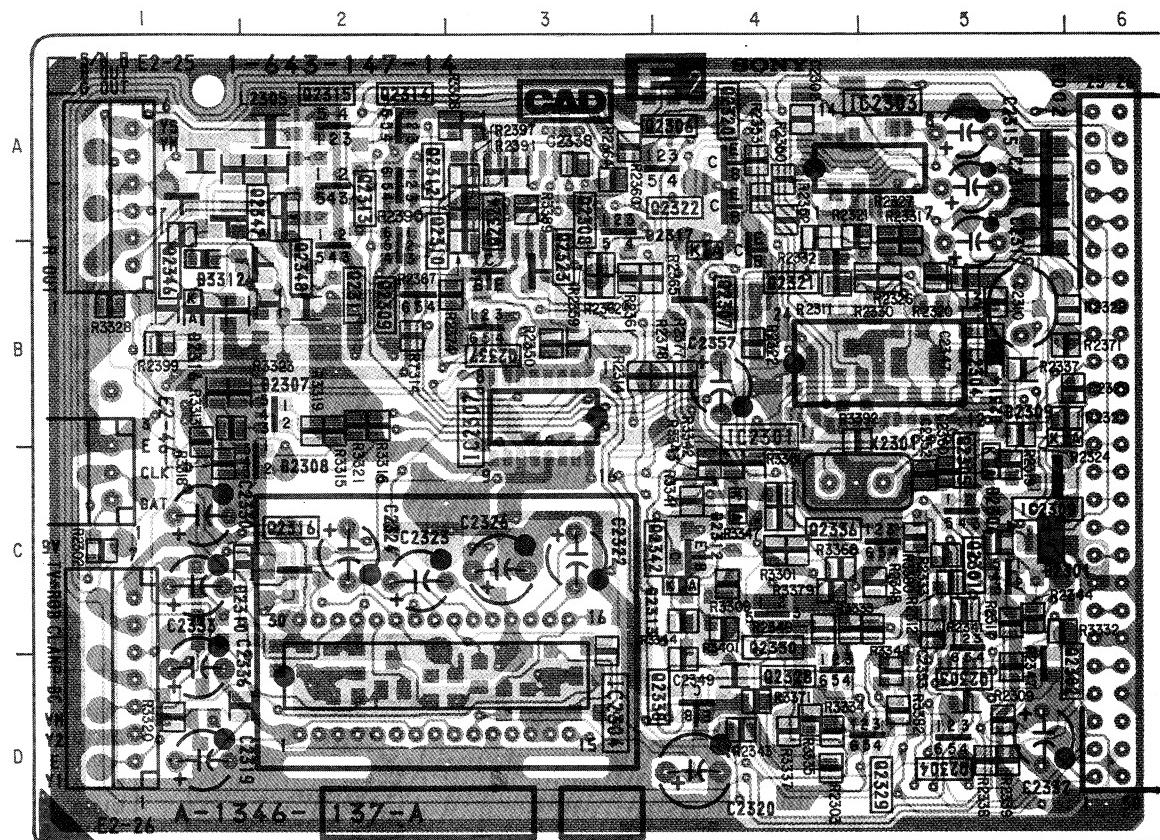


: Pattern from the side which enables seeing.

• : Pattern of the rear side.

E2 [SHARPNESS CONT,
CHARACTOR GENERATOR]

- E2 Board -



E2 Board

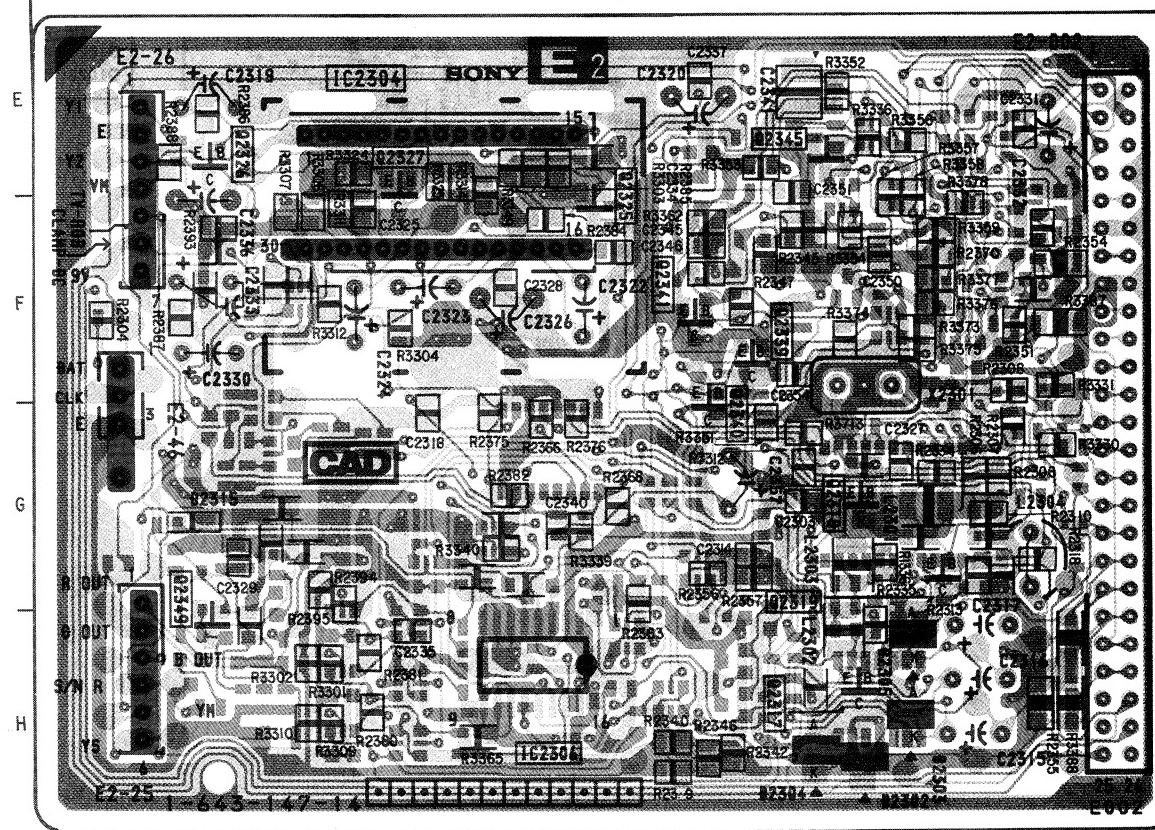
IC
IC2301 B-4
IC2303 A-5
IC2304 D-3, E-2
IC2306 H-3
IC2307 B-3

TRANSISTOR

Q2301 C-5
Q2303 C-5
Q2304 D-5
Q2305 C-5
Q2306 A-3
Q2307 B-4
Q2308 A-3
Q2309 B-2
Q2310 A-2
Q2311 A-2
Q2312 A-2
Q2313 A-2
Q2314 A-2
Q2315 A-2
Q2317 H-4
Q2318 G-4
Q2319 G-5
Q2320 A-4
Q2321 A-4
Q2322 A-4
Q2324 B-3
Q2326 E-1
Q2327 E-2
Q2330 C-4
Q2337 B-3
Q2338 D-4
Q2339 F-4
Q2340 F-4
Q2341 F-4
Q2342 C-4
Q2345 E-4

DIODE

D2306 C-5
D2307 B-2
D2308 B-2
D2309 B-5
D2312 C-4
D2313 C-4
D2314 B-5
D2317 A-4



• : Pattern from the side which enables seeing.

• : Pattern of the rear side.

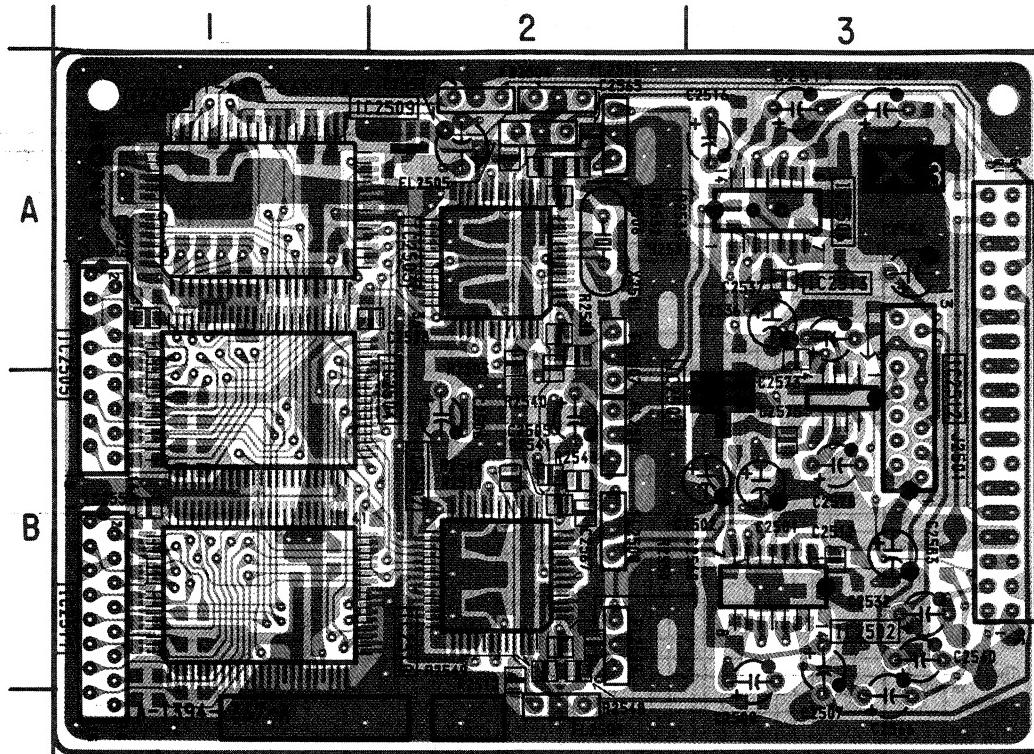
F

X3

[DIGITAL SIGNAL PROCESSOR]

- X3 Board -

G



H

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J

K

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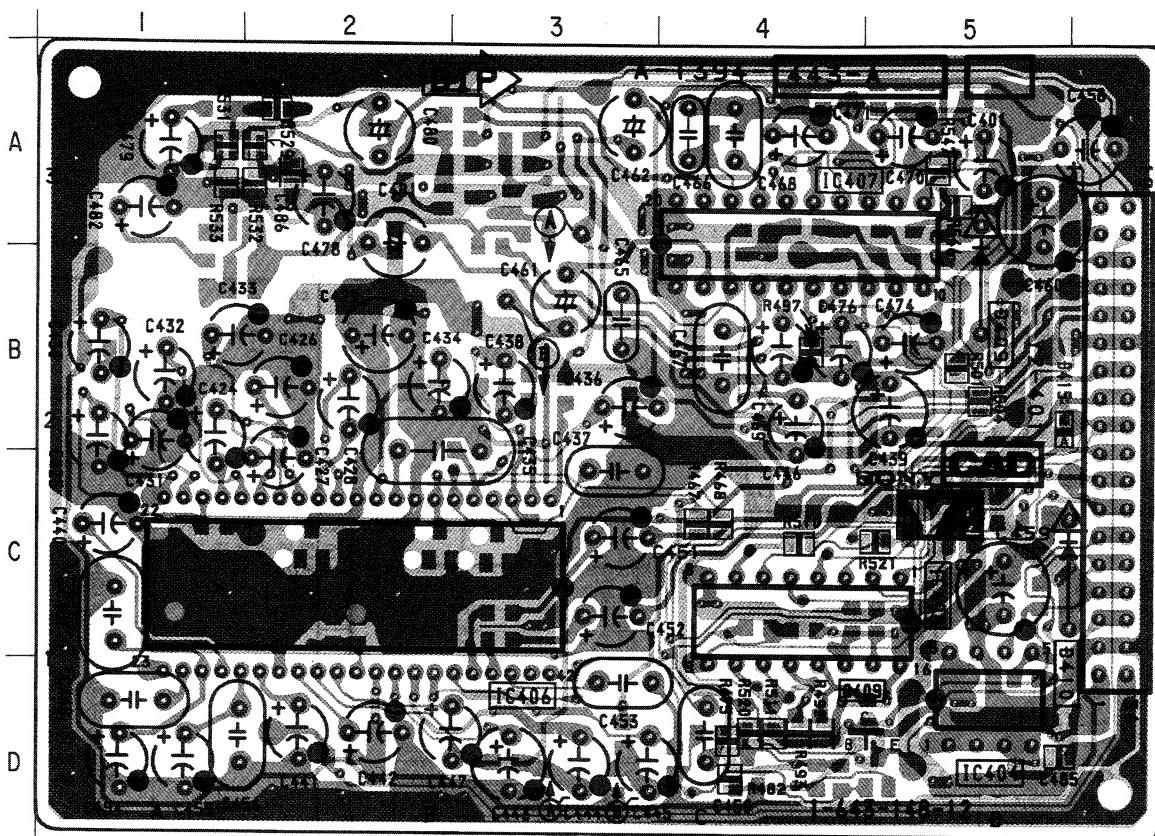
AA

BB

Y₂

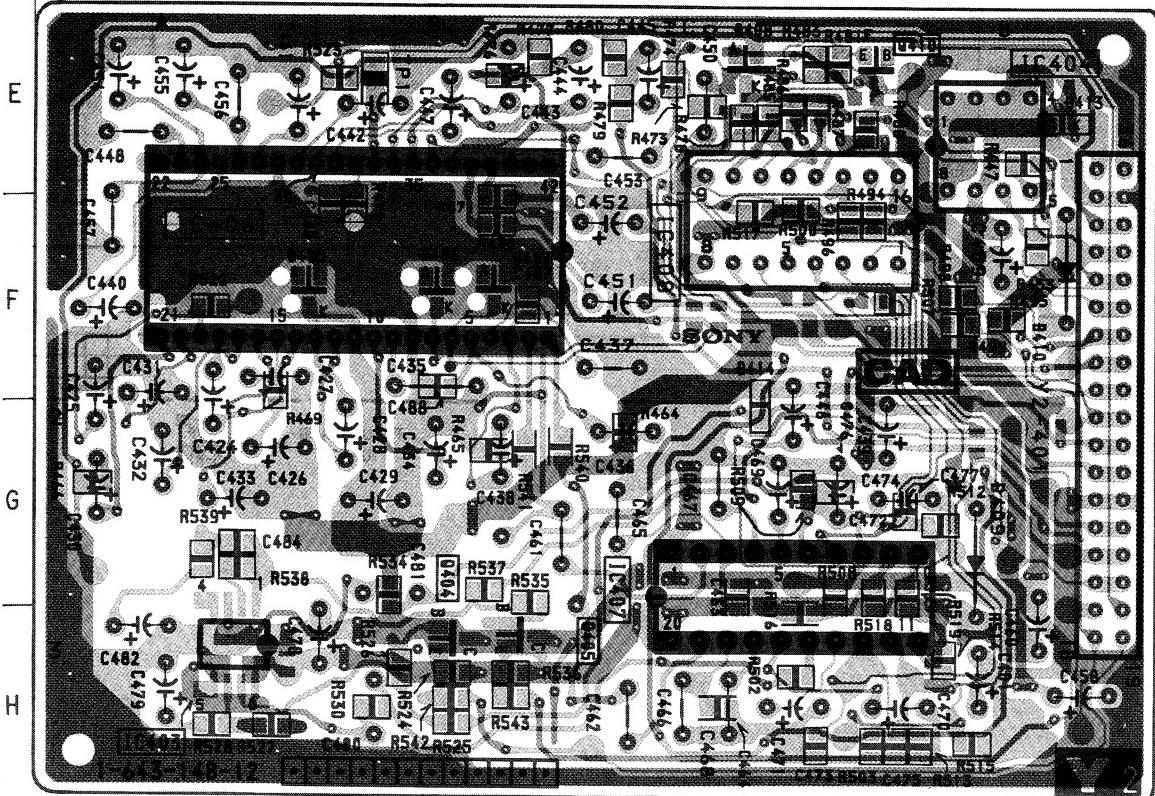
MTS DECODER,
NVM,
AUDIO CONT.

- Y2 Board -



Y2 Board

IC	
IC403	H-1
IC404	D-5, E-5
IC406	C-2, F-2
IC407	A-4, G-4
IC408	C-4, F-4
TRANSISTOR	
Q404	H-3
Q405	H-3
Q409	D-5
Q410	E-5
DIODE	
D405	F-2
D406	F-2
D407	F-3
D408	E-4
D409	A-5
D410	C-5, F-5
D413	E-6
D414	F-4
D415	B-5

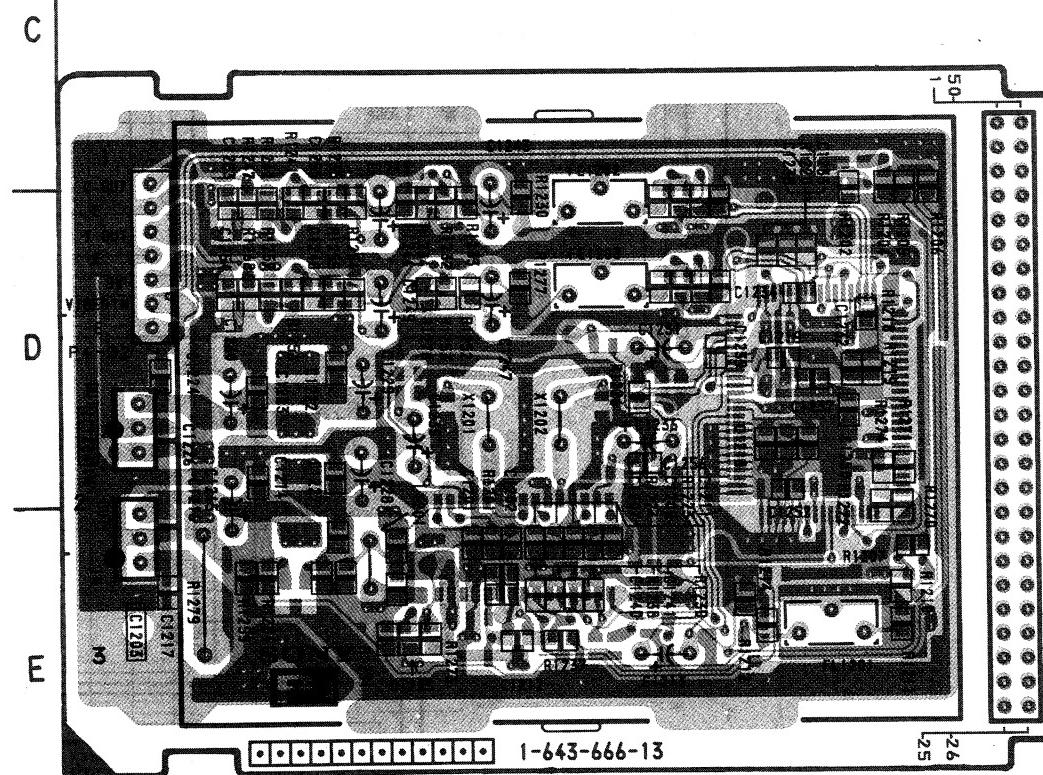
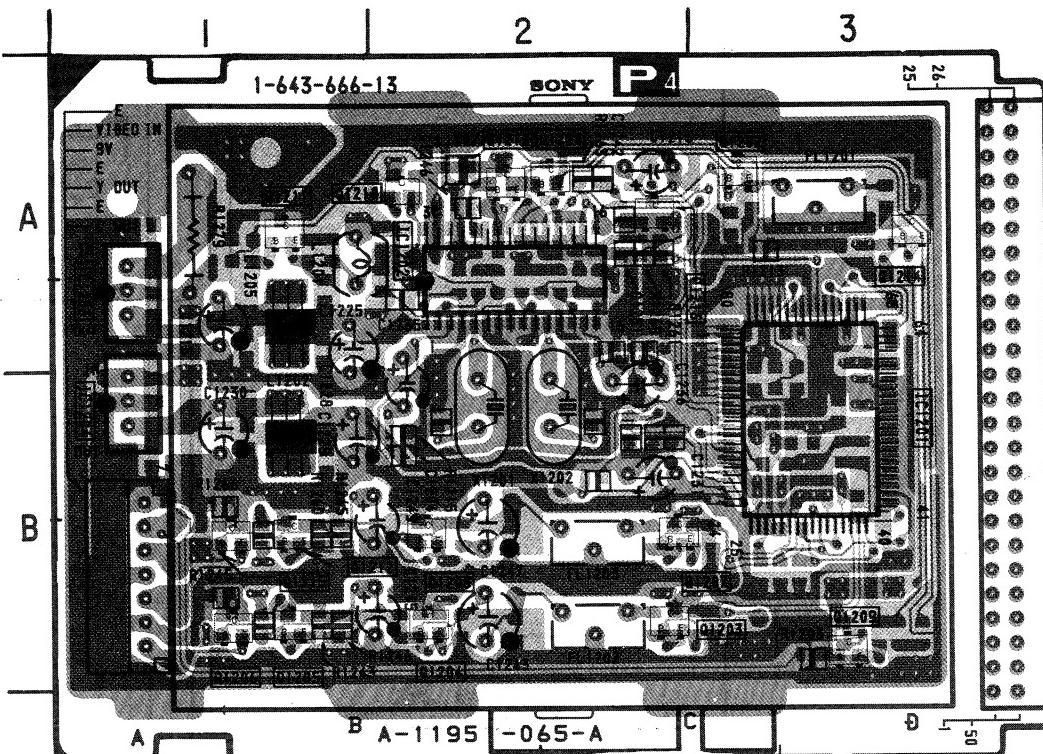


- : Pattern from the side which enables seeing.
 - : Pattern of the rear side.

P4

[DIGITAL COMB FILTER]

— P4 Board —

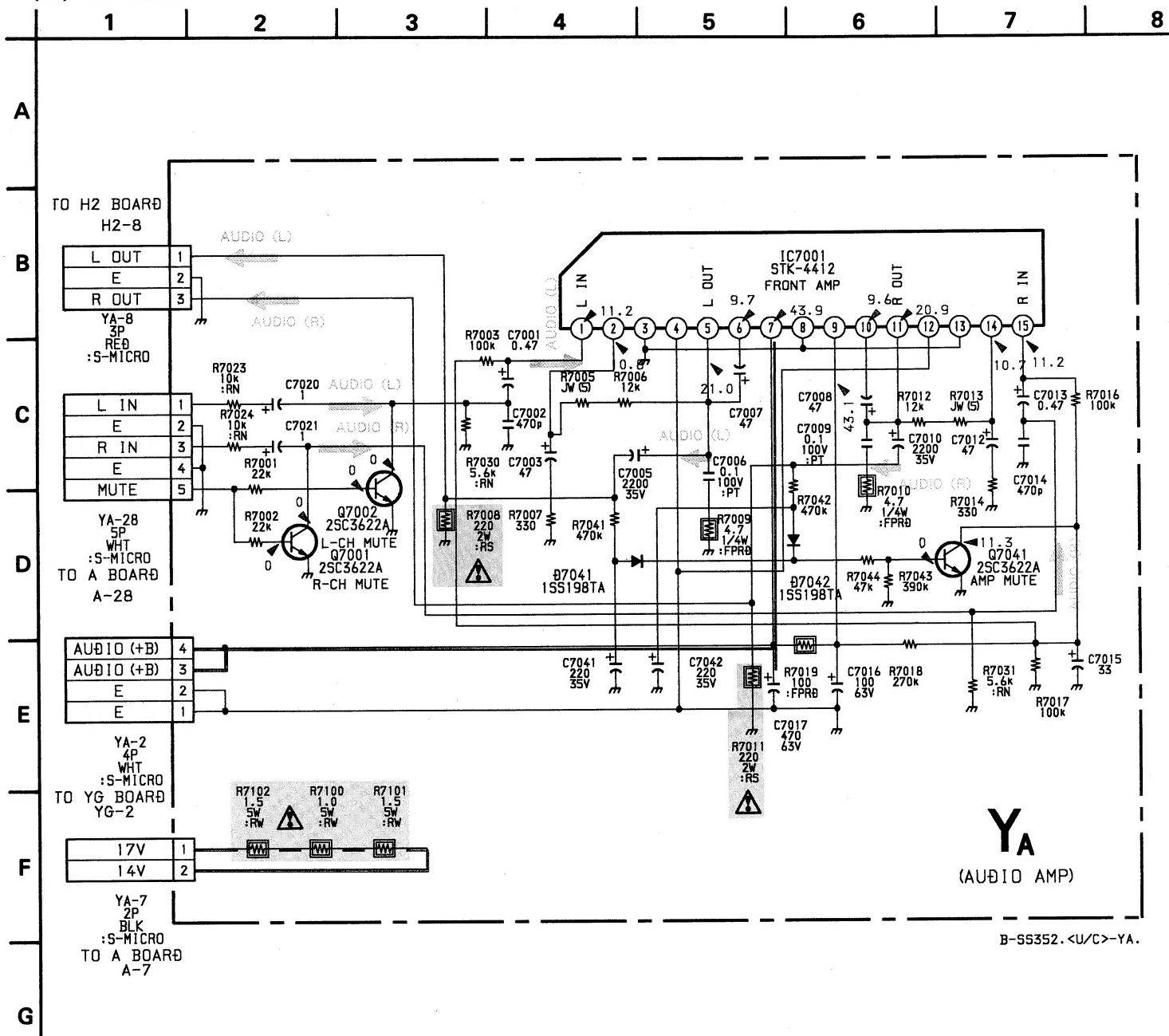


P4 Board

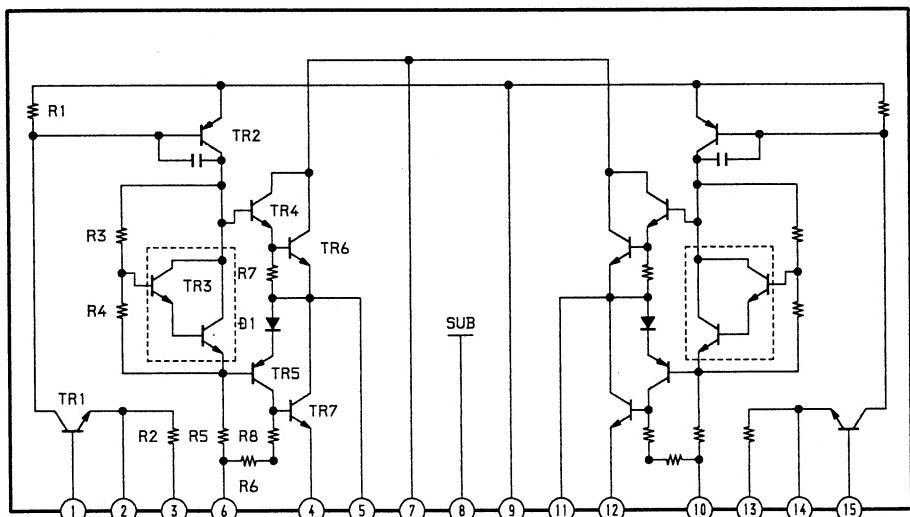
IC
IC1201 B-3
IC1202 A-2
IC1203 A-1, E-1
IC1204 B-1, D-1
TRANSISTOR
Q1202 A-3
Q1203 B-2
Q1204 B-2
Q1205 B-1
Q1206 B-1
Q1207 B-2
Q1208 B-2
Q1209 B-3
Q1211 A-1
Q1212 B-1
Q1213 A-2
Q1214 A-3
Q1215 B-1
Q1218 A-2
Q1220 A-2
CRYSTAL
X1201 B-2, D-2
X1202 B-2, D-2

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

(10) SCHEMATIC DIAGRAM OF YA BOARD



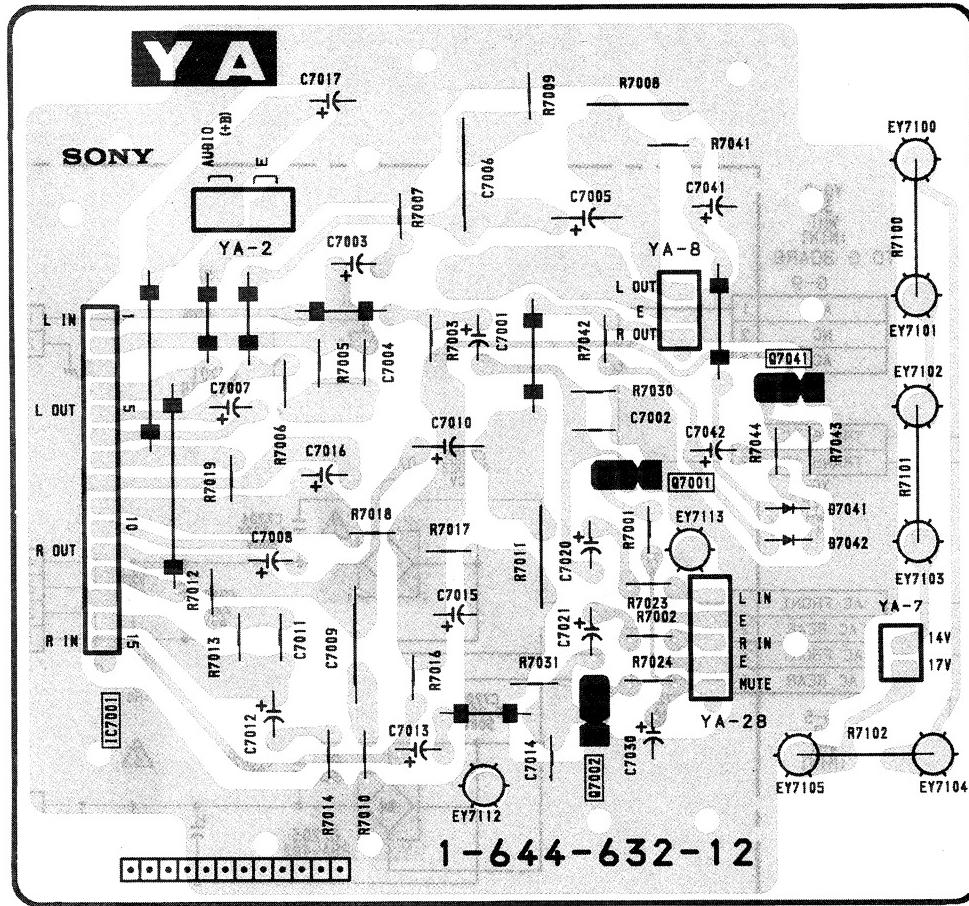
YA Board IC7001 STK4412



YA

[AUDIO AMP]

– YA Board –

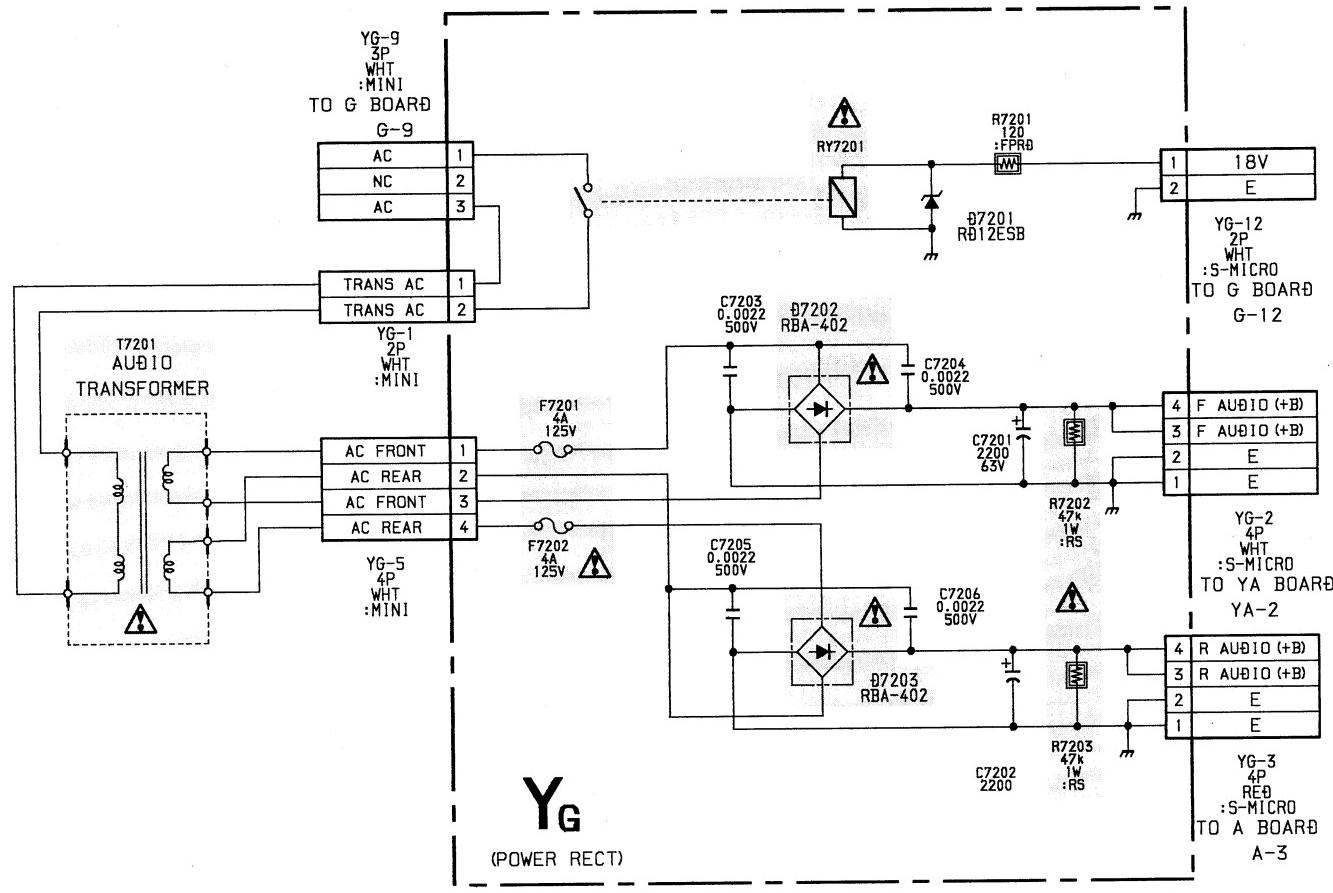


(11) SCHEMATIC DIAGRAM OF YG BOARD

1 2 3 4 5 6 7

YG

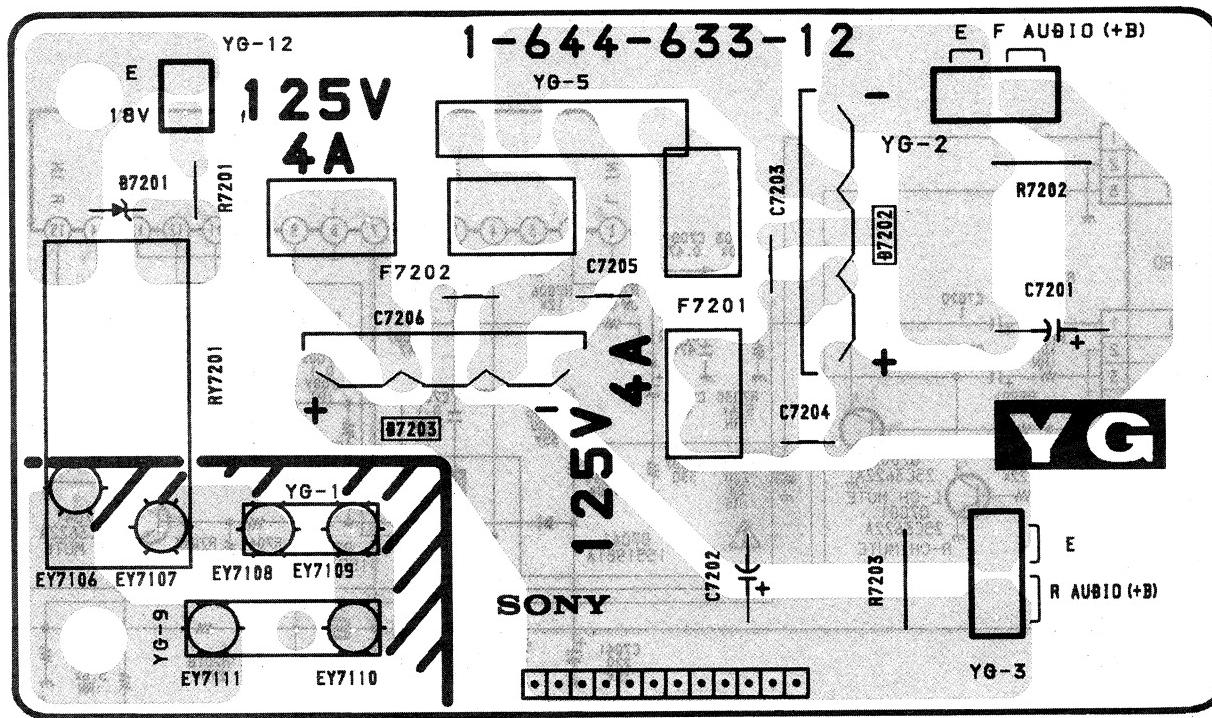
— YG E



B-55352. <U/C>-YG.

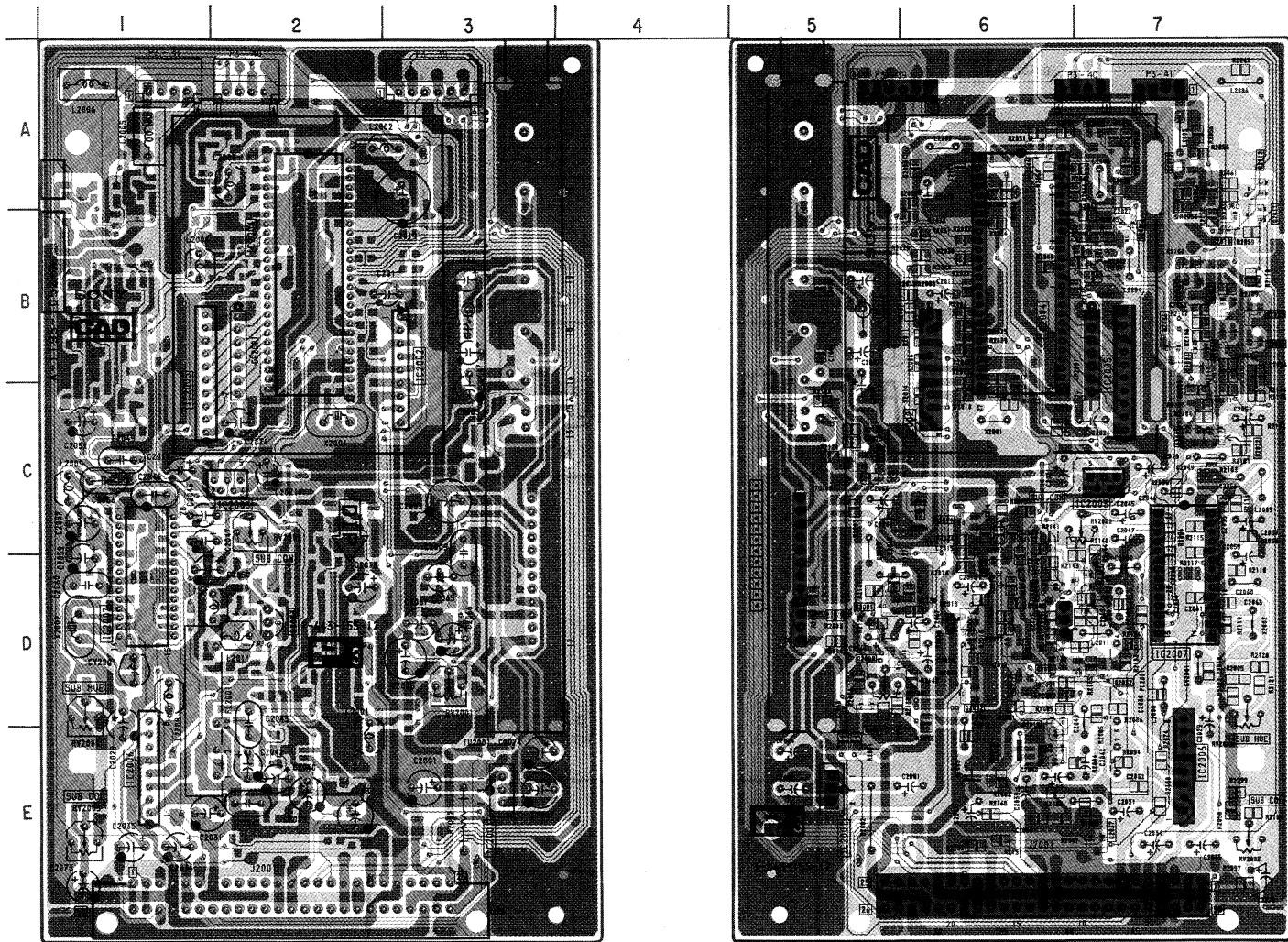
YG [POWER RECT]

- YG Board -



P3

2ND CONT. μ -CON FOR PIP,
 2ND TUNER-VIF/SIF FOR PIP,
 Y/C JUNGLE FOR PIP,
 ANT SW CONT

- P3 Board -


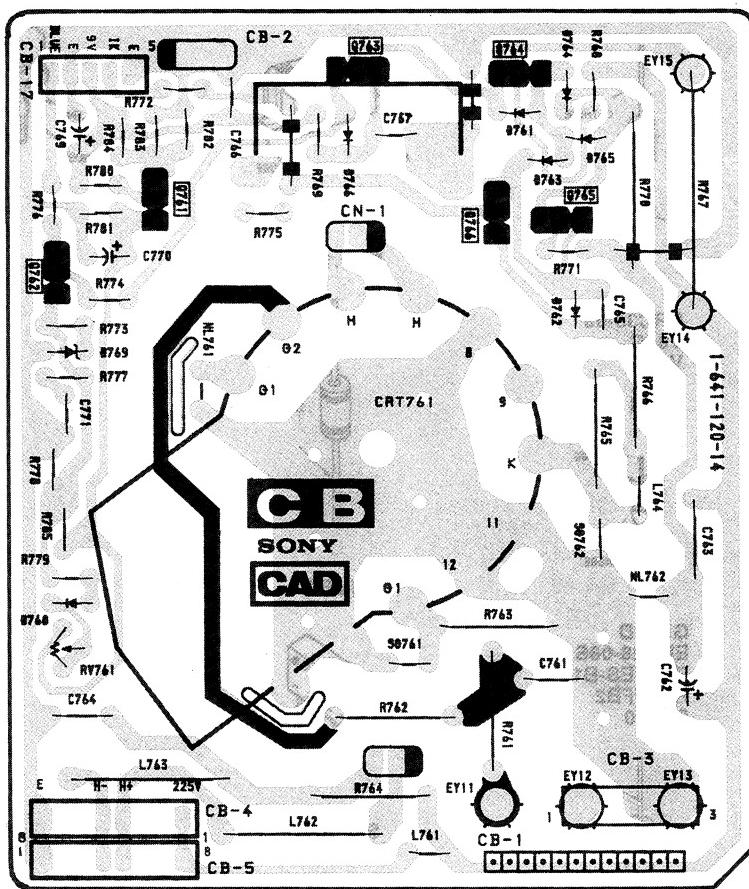
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

P3 Board

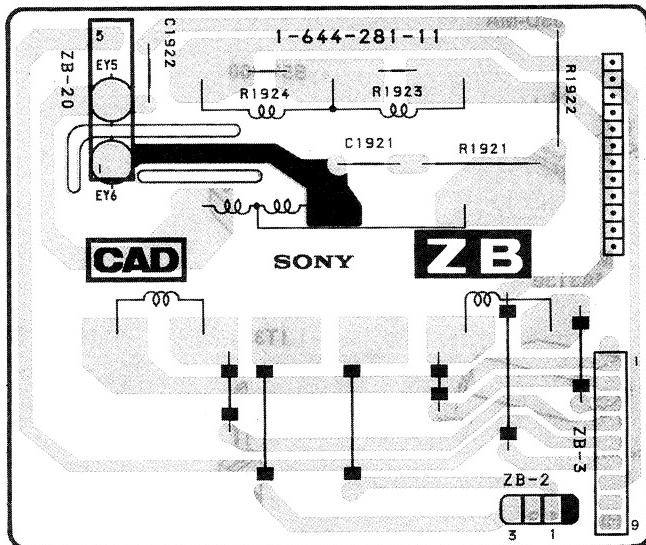
IC	Q2011 A-7 Q2012 A-7	DIODE
IC2001 E-3, E-5	Q2015 D-6	D2003 E-6
IC2002 C-3, C-6	Q2016 D-6	D2004 C-7
IC2003 C-2, C-7	Q2017 D-6	D2005 D-7
IC2004 B-2, B-6	Q2018 E-6	D2006 C-6
IC2005 C-1, C-7	Q2019 E-6	
IC2006 E-1, E-7	Q2021 D-6	
IC2007 D-1, D-7	Q2022 C-7	
	Q2023 C-7	
	Q2024 B-7	
	Q2025 B-7	
	Q2026 B-7	
	Q2027 B-7	
	Q2028 B-7	
	Q2029 B-7	
	Q2030 C-5	
	Q2031 D-5	
	Q2032 D-7	
	Q2033 D-2, D-6	
	Q2034 D-7	
	Q2035 D-6	
	Q2036 B-7	
TRANSISTOR		VARIABLE RESISTOR
Q2001 D-5		RV2001 D-3, D-5
Q2002 D-6		RV2002 C-2, C-7
Q2003 D-6		RV2003 E-1, E-7
Q2004 C-6		RV2004 D-1, D-7
Q2005 B-7		
Q2006 A-6		
Q2007 A-7		
Q2008 D-5		
Q2009 A-7		
Q2010 B-7		
		TUNER
		TU2001 D-3, D-5
		CRYSTAL
		X2001 C-2, C-6
		X2002 D-1, D-7

CB [B OUT]**ZB** [DY I/F]

- CB Board -



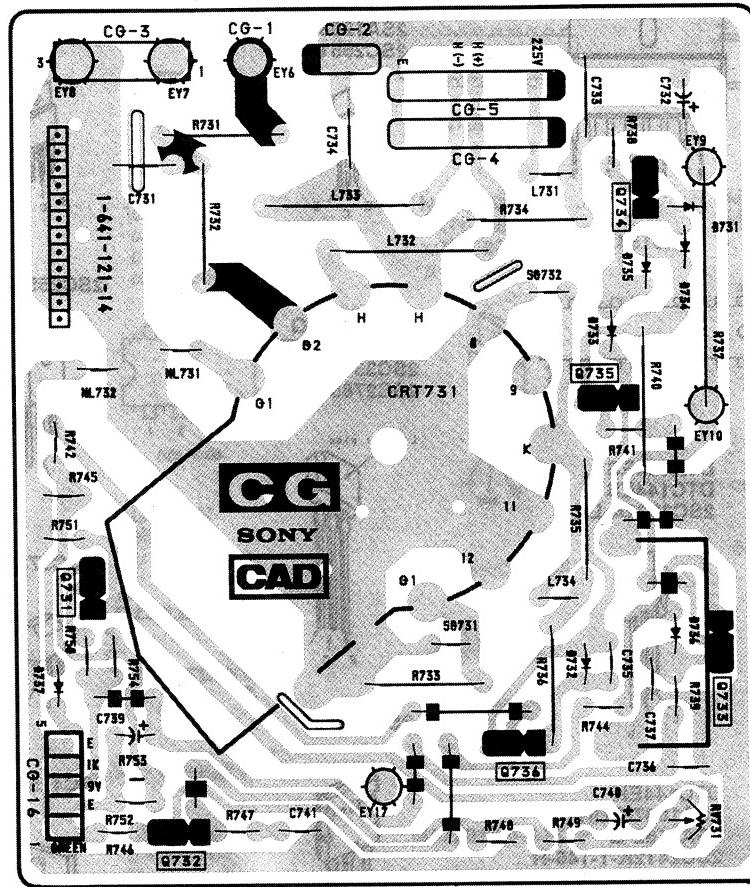
- ZB Board -



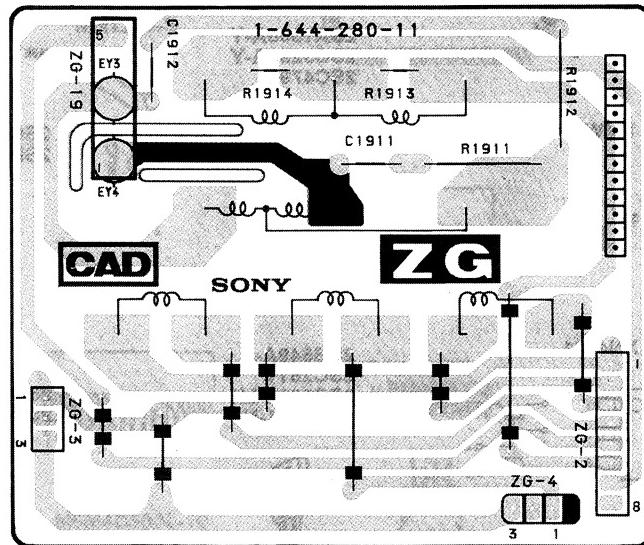
Cg | [G OUT]

ZG [DY I/F]

– CG Board –



– ZG Board –



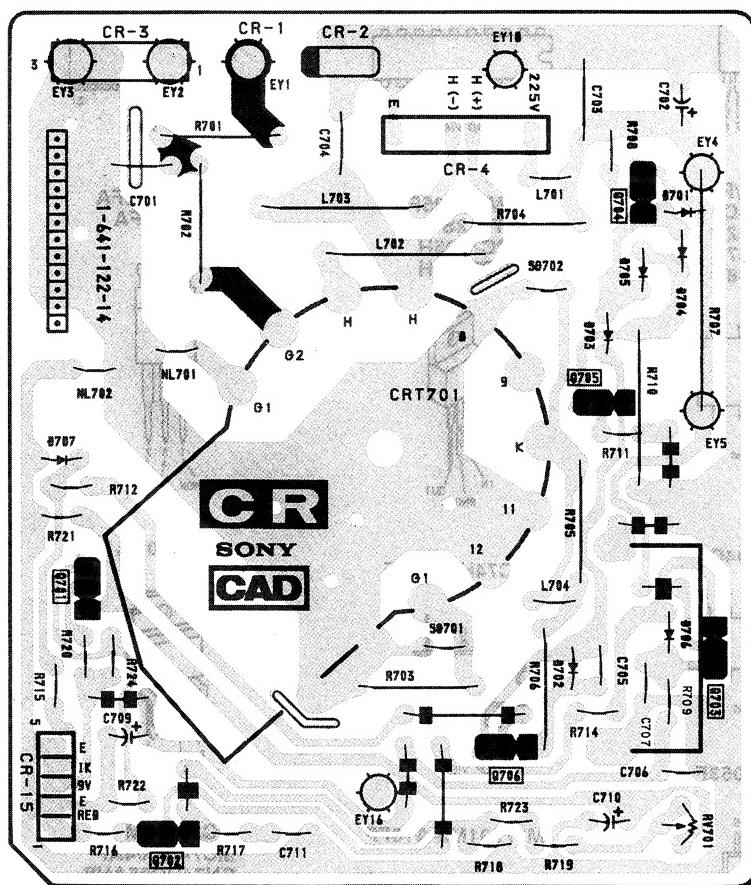
CR

[R OUT]

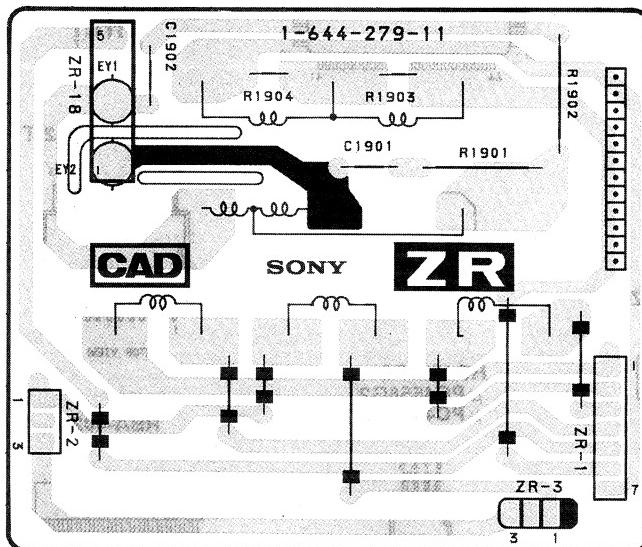
ZR

[DY I/F]

— CR Board —

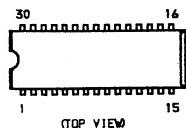


— ZR Board —

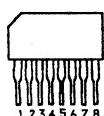


6-7. SEMICONDUCTORS

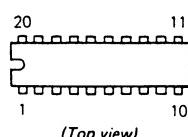
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**CXA20061
M5220L**



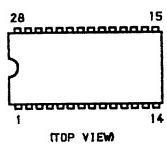
M52678P



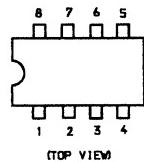
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PA0036**



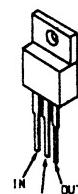
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CXA1268P**



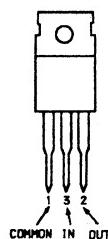
**24C04AI/P
 μ PC393C
 μ PC4082C
 μ PC4557C
 μ PC4558C**



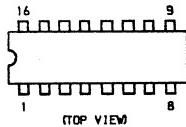
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TA7812S
 μ PC7805H
 μ PC7812H**



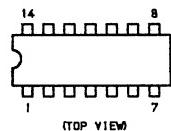
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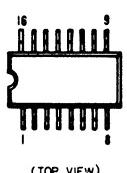
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CXA1315P
 μ PD4053BC**



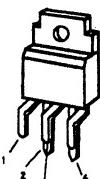
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MB3614
 μ PC1394C**



MC74HC4053F



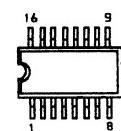
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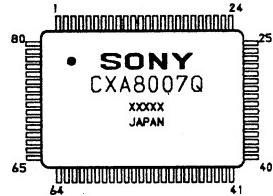
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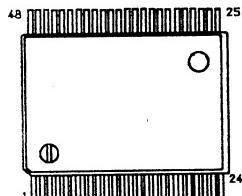
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**MC33174M
MC74HC04AF
SN74HC05ANS**



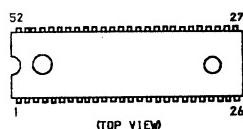
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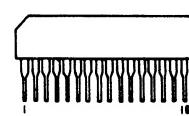
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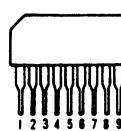
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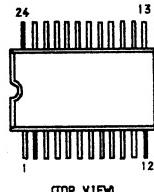
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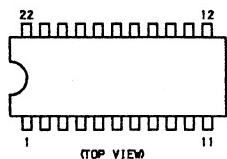
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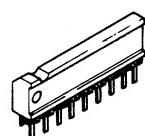
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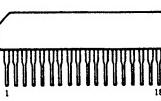
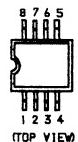
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LA7945**



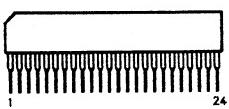
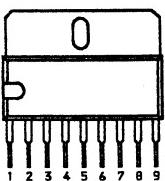
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**RC4558PS
 μ PC4558G2
 μ PC4570G2**

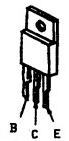


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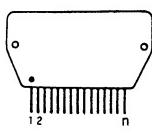
 μ PC1498H

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2SB1015-Y
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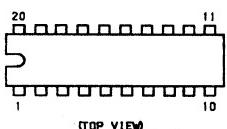


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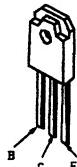
MARKING SIDE VIEW

TA8184P

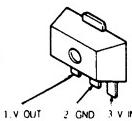


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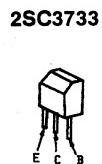
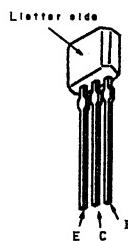
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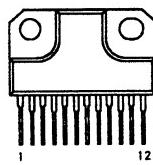
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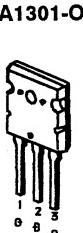
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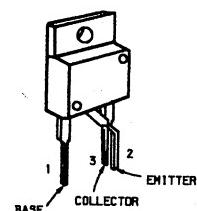
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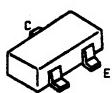
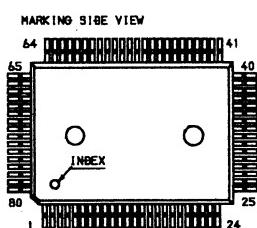
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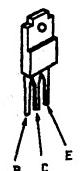
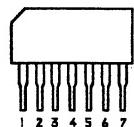
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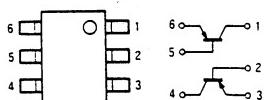
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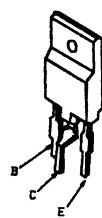
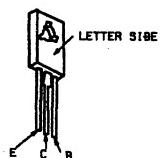
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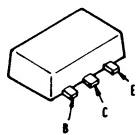
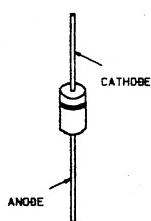
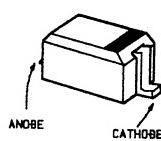
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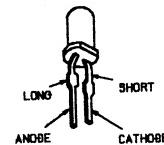
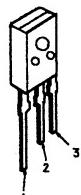
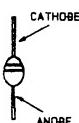
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IMZ1

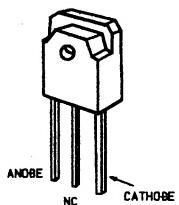
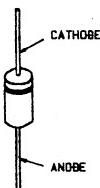
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RD5.6S-B
RD6.2S-B

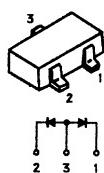
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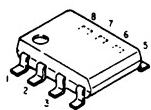
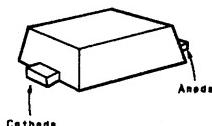
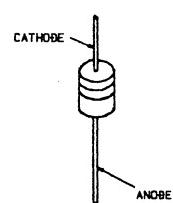
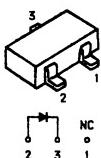
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GP08D
ERD28-08S
RD12ES-B1
RD27FB2
SB140

CXK1006L



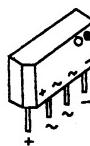
L78LR05D-MA

MA110
MA3130D1N20R
EGP10D
RB-100A
RD13ES-B2
RD18ES-B2
RD2.0ES-B1
RD24ES-B3
RD3.3ES-B2
RD3.9ES-B1
RD33ES-B2
RD39ES-B2
RD4.7ES-B2
RD5.1-B1
RD5.1ES-B2
RD5.6ES-B2
RD7.5ES-B1
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RD6.8M-B1

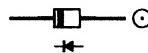
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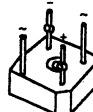
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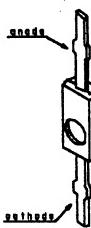
S3V10SB



S5VB60



1T33



SECTION 7

EXPLODED VIEWS

NOTE:

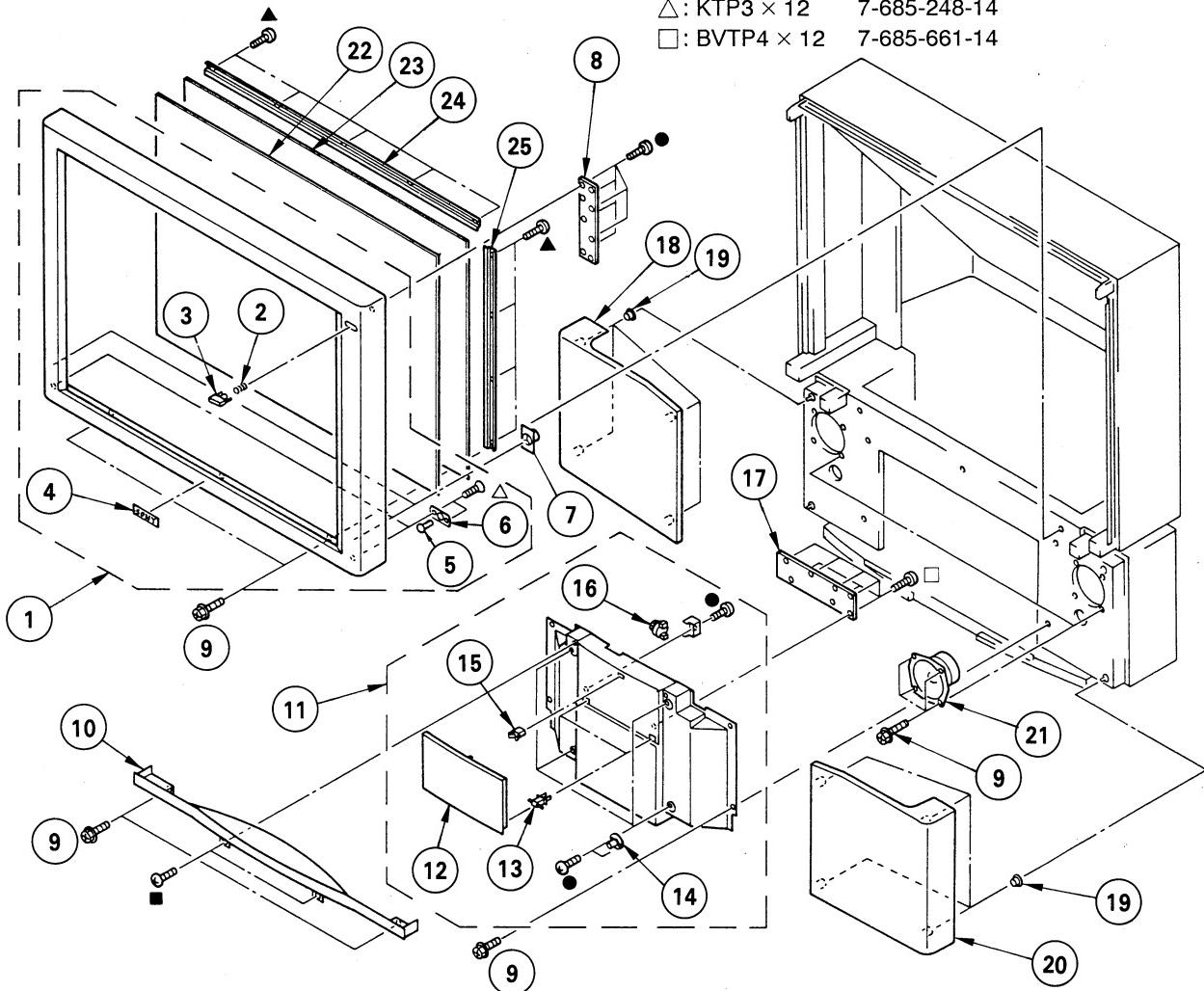
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

7-1-1. SCREEN FRAME AND CONTROL PANEL (KP-46XBR25 / 53XBR25 (US/CND))

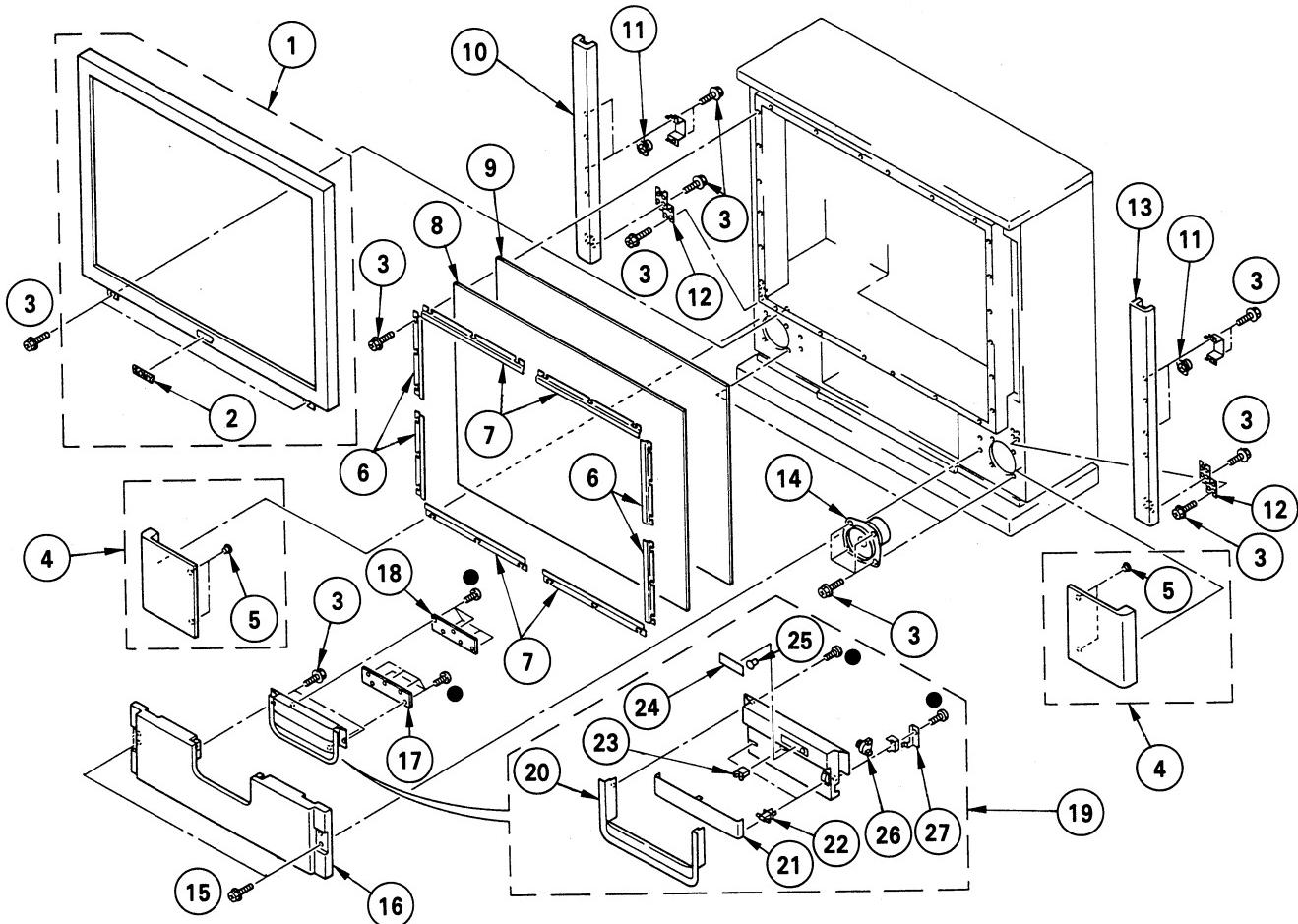
- : BVTP3 × 12 7-685-648-79
- : BVTP4 × 16 7-685-663-79
- ▲ : BVTP4 × 12 7-685-661-79
- △ : KTP3 × 12 7-685-248-14
- : BVTP4 × 12 7-685-661-14



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	X-4030-193-1	FRAME ASSY, SCREEN	2-6 (KP-46XBR25)	17	*1-643-592-11	H2 BOARD	
1	X-4031-194-1	FRAME ASSY, SCRBN	2-6 (KP-53XBR25(U/C))	18	X-4030-553-1	GRILLE (L) ASSY, SPEAKER	(KP-53XBR25(U/C))
2	3-566-903-00	SPRING		18	X-4030-570-1	GRILLE (L) ASSY, SPEAKER	(KP-46XBR25)
3	4-036-523-01	BUTTON, PQWER		19	4-838-438-00	LATCH	
4	4-381-079-01	EMBLEM (NO.10), SONY		20	X-4030-552-1	GRILLE (R) ASSY, SPEAKER	(KP-53XBR25(U/C))
5	4-838-452-00	STRIKE		20	X-4030-569-1	GRILLE (R) ASSY, SPEAKER	(KP-46XBR25)
6	4-838-453-00	SUPPORT		21	1-504-141-11	SPEAKER (13CM)	
7	1-544-580-21	SPEAKER (2.5CM)		22	4-036-466-11	PLATE (L), SIFFUSION	(KP-53XBR25(U/C))
8	*1-643-591-11	H1 BOARD		22	4-037-360-11	PLATE (L), SIFFUSION	(KP-46XBR25)
9	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD		23	4-036-469-11	PLATE (F), SIFFUSION	(KP-53XBR25(U/C))
10	4-036-470-01	ESCUTCHEON, FRONT		23	4-037-359-11	PLATE (F), SIFFUSION	(KP-46XBR25)
11	X-4030-571-1	PANEL ASSY, CONTROL (KP-46XBR25)	12-16	24	*4-036-091-11	HOLDER (L), SCRREN	(KP-53XBR25(U/C))
	X-4030-554-1	PANEL ASSY, CONTROL (KP-53XBR25(U/C))	12-16	24	*4-036-091-21	HOLDER (L), SCRREN	(KP-46XBR25)
12	4-036-461-01	LID, CONTROL		25	*4-036-092-11	HOLDER (S), SCRREN	(KP-53XBR25(U/C))
13	3-703-035-11	SHAFT, LID		25	*4-036-092-21	HOLDER (S), SCRREN	(KP-46XBR25)
14	4-843-806-00	STRIKE					
15	4-374-714-01	CATCH, PUSH					
16	3-721-204-21	DAMPER					

7-1-2. SCREEN FRAME AND CONTROL PANEL (KP-61XBR28)

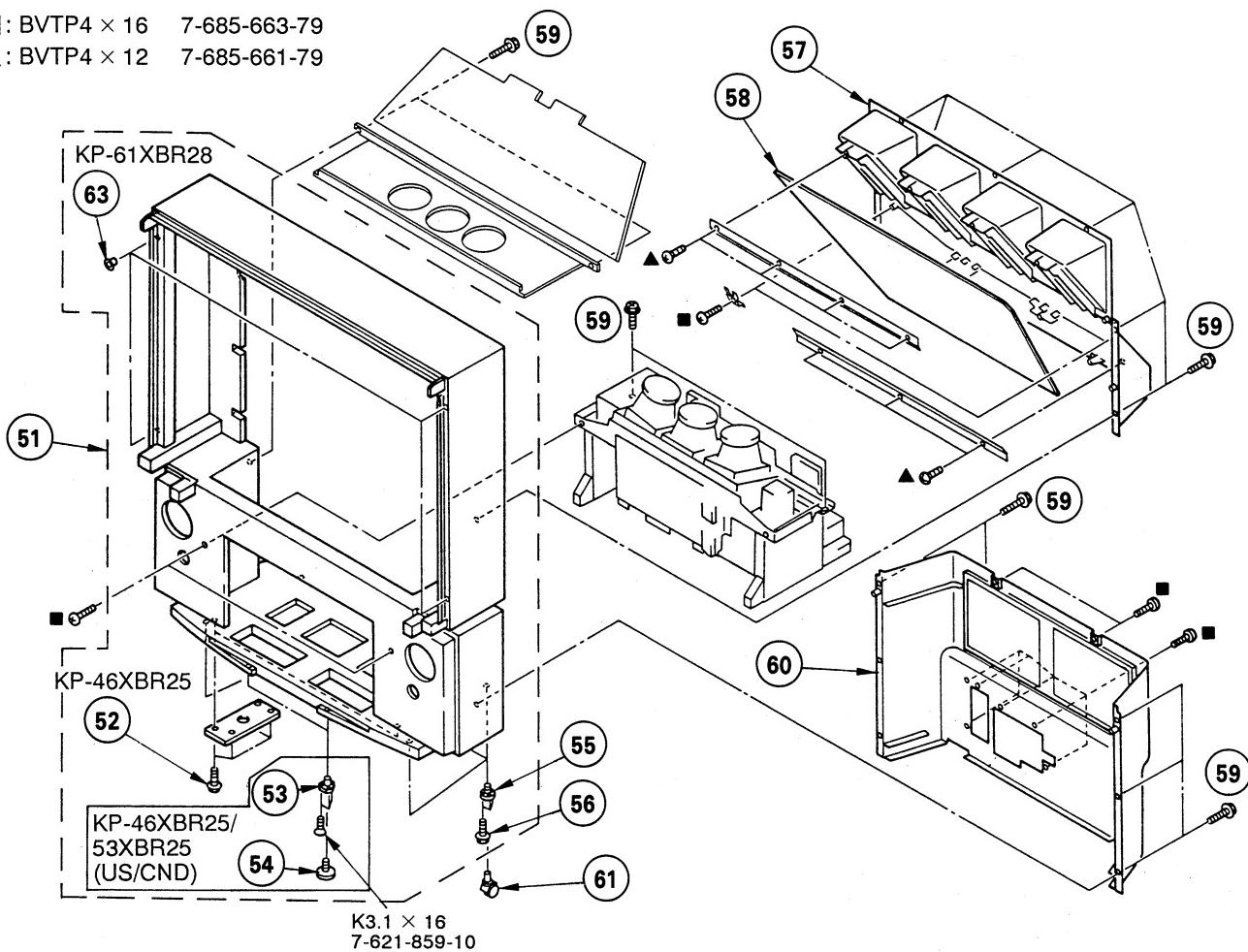
● : BVTP3 × 12 7-685-648-79



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	X-4031-177-1	FRAME ASSY, SCREEN		2	16	PANEL, FRONT	
2	4-381-079-01	EMBLEM (NO.10), SONY		17	*1-643-592-11	H2 BOARD	
3	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD		18	*1-643-591-11	H1 BOARD	
4	X-4031-175-1	GRILLE (B) ASSY, SPEAKER		19	X-4031-179-1	PANEL ASSY, CONTROL	
5	4-838-438-00	LATCH		20	4-040-584-01	COVER, EDGE	20-27
6	*4-040-122-01	HOLDER (S), SCREEN		21	4-036-511-21	LID, CONTROL	
7	*4-040-120-01	HOLDER (L), SCREEN		22	3-703-035-11	SHAFT, LID	
8	4-040-124-11	PLATE (L), DIFFUSION		23	4-374-714-01	CATCH, PUSH	
9	4-040-123-11	PLATE (F), DIFFUSION		24	4-036-510-21	PANEL, INDICATOR	
10	X-4031-174-1	GRILLE (T/L) ASSY, SPEAKER		25	*4-374-987-01	GUIDE, LIGHT	
11	1-504-312-11	SPEAKER (SQUAWKER) (5CM)		26	3-720-417-01	DAMPER, OIL	
12	*4-040-600-01	BRACKET, SPEAKER GRILLE		27	4-036-513-01	SPRING, LID	
13	X-4031-173-1	GRILLE (T/R) ASSY, SPEAKER					
14	1-504-313-11	SPEAKER (16CM)					
15	4-378-522-21	SCREW, TAPPING, HEXAGON HEAD					

7-2. CABINET

- : BVTP4 × 16 7-685-663-79
 ▲: BVTP4 × 12 7-685-661-79



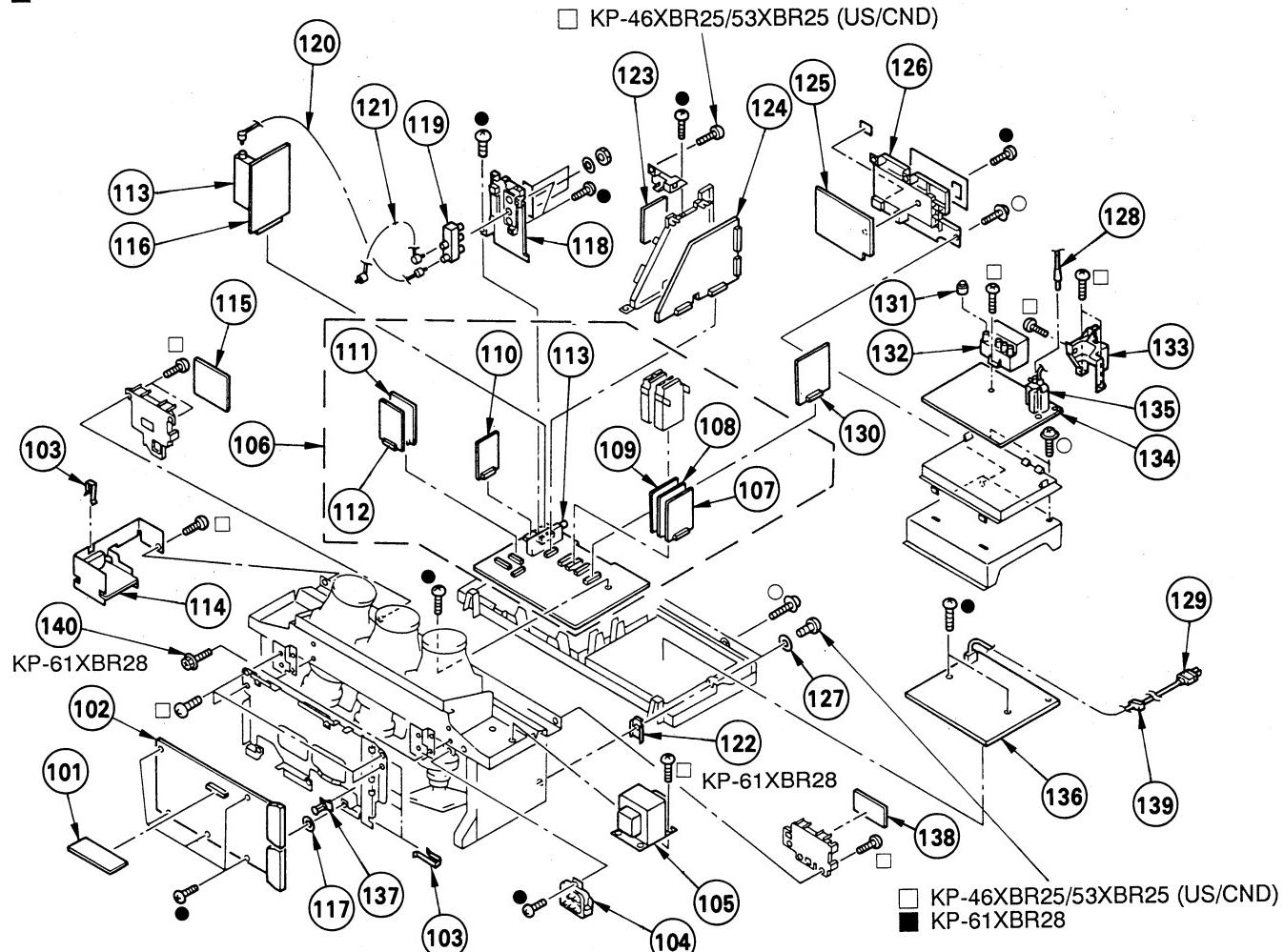
REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
51	*X-4031-084-1	CABINET ASSY	52-56 (KP-46XBR25)	58	4-040-713-01	MIRROR, REFLECTION (KP-61XBR28)	
51	*X-4031-176-1	CABINET ASSY	55, 56, 63 (KP-61XBR28)	59	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
51	*X-4031-198-1	CABINET ASSY	53-56 (KP-53XBR25(U/C))	60	X-4030-549-1	COVER ASSY, BACK	
52	4-378-522-21	SCREW, TAPPING, HEXAGON HEAD	(KP-46XBR25)	61	4-032-343-11	CASTER (KP-46XBR28/53XBR25(U/C))	
				61	4-040-508-01	CASTER (KP-61XBR28)	
53	4-037-473-01	NUT, FITTING (KP-46XBR25/53XBR25(U/C))		63	4-838-438-00	LATCH (KP-61XBR28)	
54	4-037-472-02	LEG, ADJUSTABLE (KP-46XBR25/53XBR25(U/C))					
55	4-030-850-01	SOCKET, CASTER					
56	4-378-522-01	SCREW, TAPPING, HEXAGON HEAD					
57	4-036-462-01	COVER (46"), MIRROR (KP-46XBR25)					
57	4-036-474-01	COVER (53"), MIRROR (KP-53XBR25(U/C)/61XBR28)					

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark **▲** are critical for safety. Replace only with part number specified.

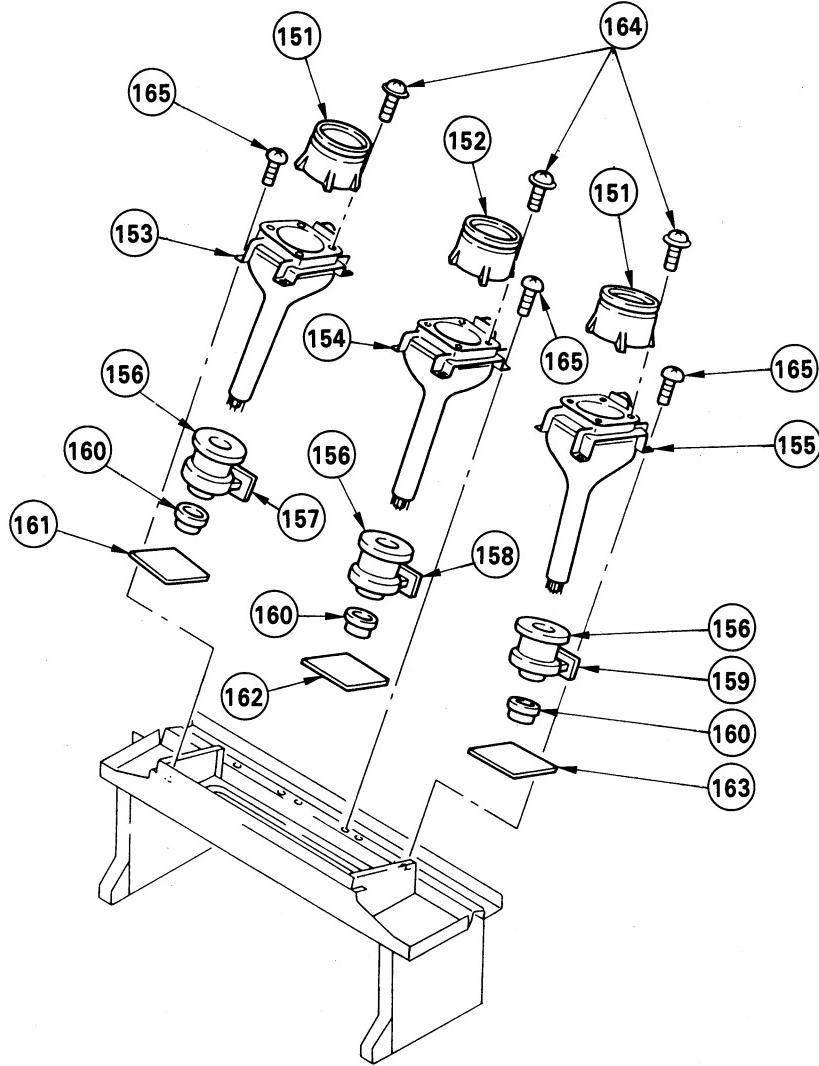
7-3. CHASSIS

- : BVTP3 × 12 7-685-648-79
- : BVTP4 × 12 7-685-661-14
- : PSW4 × 14 7-682-663-09
- : BVTP4 × 16 7-685-663-79



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
101	*1-644-278-11	DS BOARD		120	*1-557-056-31	CABLE, P-P	
102	*A-1346-117-A	D BOARD, COMPLETE		121	*1-555-400-00	CABLE, PIN	
103	*4-393-401-11	SPRING, TRANSISTOR		122	*4-040-160-01	SPACER	(KP-61XBR28)
104	▲ 1-241-744-11	RESISTOR ASSY (HIGH-VOLTAGE)		123	*A-1195-065-A	P4 BOARD, COMPLETE	
105	▲ 1-423-311-11	TRANSFORMER, POWER		124	*A-1394-429-A	U BOARD, COMPLETE	
106	*A-1297-104-A	A BOARD, COMPLETE	107-112 (KP-53XBR25 (U/C))	125	*A-1394-434-A	UT BOARDS, COMPLETE	
106	*A-1297-105-A	A BOARD, COMPLETE	107-112 (KP-46XBR25/61XBR28)	126	4-036-138-11	PANEL, MAIN CONNECTOR	
107	*A-1346-138-A	E1 BOARD, COMPLETE		127	4-039-112-01	WASHER, WAVE	
108	*A-1346-136-A	E2 BOARD, COMPLETE		128	▲ 1-559-865-41	LEAD ASSY, HIGH-VOLTAGE	
109	*A-1306-435-A	M BOARD, COMPLETE		129	▲ 1-696-002-11	CORD, POWER (WITH NOISE FILTER)	
110	*A-1195-067-A	P2 BOARD, COMPLETE		130	*A-1342-214-A	V BOARD, COMPLETE	
111	*A-1394-446-A	X3 BOARD, COMPLETE		131	4-373-137-01	CAP (Z), RUBBER	
112	*A-1394-442-A	Y2 BOARD, COMPLETE		132	▲ 1-453-108-11	DC BLOCK, HIGH-VOLTAGE	
113	▲ 1-693-102-22	TUNER (BTF-XA401)		133	4-034-482-01	COVER, FBT	
114	*1-644-632-11	YA BOARD		134	*A-1390-351-A	N BOARD, COMPLETE	
115	*A-1394-421-A	S BOARD, COMPLETE		135	▲ 1-453-121-11	TRANSFORMER ASSY, FLYBACK (NX-2630B4)	
116	*A-1195-069-A	P3 BOARD, COMPLETE		136	*A-1316-149-A	G BOARD, COMPLETE	
117	4-866-147-00	WASHER		137	*3-670-570-21	SPACER, SUPPORT	
118	4-036-137-03	PANEL, SUB CONNECTOR		138	*1-644-633-11	YG BOARD	
119	1-417-178-11	SELECTOR, ANTENNA (AS-2)		139	4-388-328-11	GROMMET, AC CORD	
				140	4-378-522-01	SCREW, TAPPING, HEXAGON HEAD (KP-61XBR28)	

7-4. PICTURE TUBE



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
151	4-034-057-01	LENS (LINNIT) (KP-46XBR28/53XBR25(U/C))		155	A.8-736-640-05	PICTURE TUBE 07MK2(B) (SD-249)	
151	4-040-131-01	LENS (LINNIT POINT 6) (KP-61XBR28)		156	A.1-451-396-21	DEFLECTION YOKE (Y93GPA)	
152	4-034-057-01	LENS (LINNIT) (KP-46XBR28/53XBR25(U/C))		157	*A-1390-340-A	ZR BOARD, COMPLETE	
152	4-040-131-11	LENS (LINNIT POINT 6) (KP-61XBR28)		158	*A-1390-346-A	ZG BOARD, COMPLETE	
153	A.8-736-633-05	PICTURE TUBE 07MK2(R) (SD-249) (KP-46XBR25/53XBR25(U/C))		159	*A-1390-347-A	ZB BOARD, COMPLETE	
153	A.8-736-641-05	PICTURE TUBE 07MK2(R) (SD-249) (KP-61XBR28)		160	.1-452-443-13	NECK ASSY, PICTURE TUBE (NA367)	
154	A.8-736-631-05	PICTURE TUBE 07MK3(G) (SD-249) (KP-46XBR25/53XBR25(U/C))		161	*A-1331-259-A	CR BOARD, COMPLETE	
154	A.8-736-634-05	PICTURE TUBE 07MK3(G) (SD-249) (KP-61XBR28)		162	*A-1331-260-A	CG BOARD, COMPLETE	
155	A.8-736-632-05	PICTURE TUBE 07MK2(B) (SD-249) (KP-46XBR25/53XBR25(U/C))		163	*A-1331-261-A	CB BOARD, COMPLETE	
				164	3-701-810-91	SCREW, TERMINAL	
				165	3-703-251-01	SCREW TP4X12 +PWH	

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

P4

SECTION 8

ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark **A** are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS

• MF : μF , PF : $\mu\mu\text{F}$ • MMH : mH , UH : μH

- The components identified by **B** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

• * : Selected to yield optimum performance.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
*A-1195-065-A	P4 BOARD, COMPLETE			C1253	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	
<CAPACITOR>								
C1201	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	C1254	1-164-004-11	CERAMIC CHIP 0.1MR	10% 25V
C1202	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	C1255	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1203	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	C1256	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C1204	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V				
C1205	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V				
<FILTER>								
C1206	1-163-093-00	CERAMIC CHIP 10PF	5%	50V	FL1201	1-239-550-11	FILTER, LOW PASS	
C1207	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	FL1202	1-239-550-11	FILTER, LOW PASS	
C1208	1-163-237-11	CERAMIC CHIP 27PF	5%	50V	FL1203	1-239-550-11	FILTER, LOW PASS	
C1210	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V				
C1211	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V				
<IC>								
C1213	1-126-154-11	ELECT 47MF	20%	6.3V	IC1201	8-752-352-20	IC CXD2023Q	
C1214	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	IC1202	8-752-062-80	IC CXA1686M	
C1215	1-126-154-11	ELECT 47MF	20%	6.3V	IC1203	8-759-112-06	IC UPC78N05H	
C1216	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	IC1204	8-759-112-06	IC UPC78N05H	
C1217	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V				
<COIL>								
C1218	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	L1201	1-408-423-00	INDUCTOR 150UH	
C1219	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	L1202	1-414-042-21	INDUCTOR 18UH	
C1220	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	L1205	1-414-042-21	INDUCTOR 18UH	
C1221	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V				
C1222	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V				
<CONNECTOR>								
C1223	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	P4-32	*1-564-522-11	PLUG, CONNECTOR 7P	
C1224	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V				
C1225	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V				
C1226	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V				
C1227	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V				
<TRANSISTOR>								
C1228	1-126-154-11	ELECT 47MF	20%	6.3V	Q1202	8-729-422-27	TRANSISTOR 2SD601A-Q	
C1229	1-126-157-11	ELECT 10MF	20%	6.3V	Q1203	8-729-216-22	TRANSISTOR 2SA1162-G	
C1230	1-126-157-11	ELECT 10MF	20%	6.3V	Q1204	8-729-422-27	TRANSISTOR 2SD601A-Q	
C1231	1-126-157-11	ELECT 10MF	20%	6.3V	Q1205	8-729-422-27	TRANSISTOR 2SD601A-Q	
C1232	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	Q1206	8-729-422-27	TRANSISTOR 2SD601A-Q	
<RESISTOR>								
C1233	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	Q1207	8-729-216-22	TRANSISTOR 2SA1162-G	
C1234	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	Q1208	8-729-422-27	TRANSISTOR 2SD601A-Q	
C1235	1-124-257-00	ELECT 2.2MF	20%	50V	Q1209	8-729-422-27	TRANSISTOR 2SD601A-Q	
C1237	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	Q1211	8-729-216-22	TRANSISTOR 2SA1162-G	
C1238	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	Q1212	8-729-422-27	TRANSISTOR 2SD601A-Q	
<RESISTOR>								
C1239	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	Q1213	8-729-422-27	TRANSISTOR 2SD601A-Q	
C1240	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	Q1214	8-729-216-22	TRANSISTOR 2SA1162-G	
C1241	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V	Q1215	8-729-422-27	TRANSISTOR 2SD601A-Q	
C1242	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	Q1218	8-729-216-22	TRANSISTOR 2SA1162-G	
C1243	1-126-177-11	ELECT 100MF	20%	6.3V	Q1220	8-729-901-01	TRANSISTOR DTC144EK	
<RESISTOR>								
C1245	1-126-157-11	ELECT 10MF	20%	6.3V				
C1246	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	R1201	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
C1249	1-126-157-11	ELECT 10MF	20%	6.3V	R1202	1-216-001-00	METAL GLAZE 10 5% 1/10W	
C1250	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	R1203	1-216-025-00	METAL GLAZE 100 5% 1/10W	
C1251	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	R1204	1-216-630-11	METAL CHIP 130 0.50% 1/10W	
C1252	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	R1205	1-216-639-11	METAL CHIP 330 0.50% 1/10W	

P4

P3

REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK	
R1206	1-216-620-11	METAL CHIP	51	0.50%	1/10W	R1284	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1207	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R1208	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R1209	1-216-635-11	METAL CHIP	220	0.50%	1/10W						
R1210	1-216-049-00	METAL GLAZE	1K	5%	1/10W						
R1211	1-216-043-00	METAL GLAZE	560	5%	1/10W	X1201	1-577-611-11	OSCILATOR, CERAMIC			
R1212	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	X1202	1-567-878-11	VIBRATOR, CRYSTAL			
R1213	1-216-001-00	METAL GLAZE	10	5%	1/10W						
R1214	1-216-049-00	METAL GLAZE	1K	5%	1/10W						
R1215	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W						
R1216	1-216-041-00	METAL GLAZE	470	5%	1/10W						
R1217	1-216-077-00	METAL GLAZE	15K	5%	1/10W						
R1218	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W						
R1219	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W						
R1220	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W						
R1221	1-216-023-00	METAL GLAZE	82	5%	1/10W						
R1222	1-216-103-00	METAL GLAZE	180K	5%	1/10W						
R1223	1-216-089-00	METAL GLAZE	47K	5%	1/10W						
R1224	1-216-089-00	METAL GLAZE	47K	5%	1/10W						
R1225	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W						
R1226	1-216-666-11	METAL CHIP	4.3K	0.50%	1/10W						
R1228	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W						
R1229	1-216-043-00	METAL GLAZE	560	5%	1/10W						
R1230	1-216-075-00	METAL GLAZE	12K	5%	1/10W						
R1231	1-216-073-00	METAL GLAZE	10K	5%	1/10W						
R1232	1-216-689-11	METAL GLAZE	39K	5%	1/10W						
R1233	1-216-077-00	METAL GLAZE	15K	5%	1/10W						
R1234	1-216-035-00	METAL GLAZE	270	5%	1/10W						
R1235	1-216-037-00	METAL GLAZE	330	5%	1/10W						
R1238	1-216-073-00	METAL GLAZE	10K	5%	1/10W						
R1239	1-216-073-00	METAL GLAZE	10K	5%	1/10W						
R1241	1-216-035-00	METAL GLAZE	270	5%	1/10W						
R1242	1-216-043-00	METAL GLAZE	560	5%	1/10W						
R1243	1-216-689-11	METAL GLAZE	39K	5%	1/10W						
R1244	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R1245	1-216-001-00	METAL GLAZE	10	5%	1/10W						
R1246	1-216-077-00	METAL GLAZE	15K	5%	1/10W						
R1247	1-216-089-00	METAL GLAZE	47K	5%	1/10W						
R1248	1-216-635-11	METAL CHIP	220	0.50%	1/10W						
R1249	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R1250	1-216-043-00	METAL GLAZE	560	5%	1/10W						
R1251	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W						
R1252	1-216-295-00	METAL GLAZE	0	5%	1/10W						
R1253	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W						
R1254	1-216-035-00	METAL GLAZE	270	5%	1/10W						
R1255	1-216-639-11	METAL CHIP	330	0.50%	1/10W						
R1256	1-216-035-00	METAL GLAZE	270	5%	1/10W						
R1257	1-216-645-11	METAL CHIP	560	0.50%	1/10W						
R1258	1-216-073-00	METAL GLAZE	10K	5%	1/10W						
R1259	1-216-644-11	METAL CHIP	510	0.50%	1/10W						
R1260	1-216-075-00	METAL GLAZE	12K	5%	1/10W						
R1261	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R1262	1-216-049-00	METAL GLAZE	1K	5%	1/10W						
R1263	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R1264	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R1265	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W						
R1266	1-216-001-00	METAL GLAZE	10	5%	1/10W						
R1267	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W						
R1268	1-216-089-00	METAL GLAZE	47K	5%	1/10W						
R1269	1-216-049-00	METAL GLAZE	1K	5%	1/10W						
R1270	1-216-295-00	METAL GLAZE	0	5%	1/10W						
R1273	1-216-049-00	METAL GLAZE	1K	5%	1/10W						
R1274	1-216-295-00	METAL GLAZE	0	5%	1/10W						
R1276	1-216-295-00	METAL GLAZE	0	5%	1/10W						
<CRYSTAL>											

*A-1195-069-A P3 BOARD, COMPLETE											

<CAPACITOR>											
C2001	1-124-910-11	ELECT				47MF		20%	50V		
C2002	1-124-910-11	ELECT				47MF		20%	50V		
C2003	1-124-119-00	ELECT				330MF		20%	16V		
C2004	1-164-232-11	CERAMIC CHIP	0.01MF				10%	50V			
C2005	1-124-261-00	ELECT				10MF		20%	50V		
C2006	1-164-232-11	CERAMIC CHIP	0.01MF				10%	50V			
C2007	1-126-157-11	ELECT				10MF		20%	16V		
C2008	1-163-031-11	CERAMIC CHIP	0.01MF				5%	50V			
C2009	1-163-157-00	FILM				0.022MF		5%	50V		
C2010	1-164-161-11	CERAMIC CHIP	0.0022MF				50V				
C2011	1-126-157-11	ELECT				10MF		20%	16V		
C2013	1-126-301-11	ELECT				1MF		20%	50V		
C2014	1-164-161-11	CERAMIC CHIP	0.0022MF				10%	50V			
C2015	1-163-117-00	CERAMIC CHIP	100PF				5%	50V			
C2016	1-163-109-00	CERAMIC CHIP	47PF				5%	50V			
C2017	1-163-109-00	CERAMIC CHIP	47PF				5%	50V			
C2018	1-124-465-00	ELECT				0.47MF		20%	50V		
C2019	1-126-103-11	ELECT				470MF		20%	16V		
C2020	1-163-031-11	CERAMIC CHIP	0.01MF				50V				
C2021	1-126-157-11	ELECT				10MF		20%	16V		
C2022	1-164-232-11	CERAMIC CHIP	0.01MF				10%	50V			
C2023	1-163-119-00	CERAMIC CHIP	120PF				5%	50V			
C2024	1-124-465-00	ELECT				0.47MF		20%	50V		
C2025	1-126-157-11	ELECT				10MF		20%	16V		
C2026	1-163-101-00	CERAMIC CHIP	22PF				5%	50V			
C2027	1-163-103-00	CERAMIC CHIP	27PF				5%	50V			
C2028	1-163-107-00	CERAMIC CHIP	39PF				5%	50V			
C2029	1-124-477-11	ELECT				47MF		20%	16V		
C2031	1-124-910-11	ELECT				47MF		20%	50V		
C2032	1-164-232-11	CERAMIC CHIP	0.01MF				10%	50V			
C2034	1-126-157-11	ELECT				10MF		20%	16V		
C2035	1-126-157-11	ELECT				10MF		20%	16V		
C2036	1-163-025-11	CERAMIC CHIP	0.001MF				50V				
C2037	1-124-477-11	ELECT				47MF		20%	16V		
C2038	1-164-161-11	CERAMIC CHIP	0.0022MF				10%	50V			
C2039	1-124-477-11	ELECT				47MF		20%	16V		
C2040	1-124-903-11	ELECT				1MF		20%	50V		
C2041	1-130-475-00	MYLAR				0.0022MF		5%	50V		
C2042	1-124-902-00	ELECT				0.47MF		20%	50V		
C2043	1-136-161-00	FILM				0.047MF		5%	50V		
C2044	1-163-031-11	CERAMIC CHIP	0.01MF				50V				
C2045	1-126-157-11	ELECT				10MF		20%	16V		
C2046	1-136-169-00	FILM				0.22MF		5%	50V		
C2047	1-124-463-00	ELECT				0.1MF		20%	50V		
C2048	1-163-031-11	CERAMIC CHIP	0.01MF				50V				
C2049	1-136-165-00	FILM				0.1MF		5%	50V		
C2050	1-124-902-00	ELECT				0.47MF		20%	50V		
C2051	1-126-157-11	ELECT				10MF		20%	16V		
C2052	1-163-129-00	CERAMIC CHIP	330PF				5%	50V			
C2053	1-163-093-00	CERAMIC CHIP	10PF				5%	50V			

P3

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The components identified by shading and mark **▲** are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C2054	1-163-093-00	CERAMIC CHIP 10PF	5%	50V	P3-39	*1-564-521-11	PLUG, CONNECTOR 6P
C2055	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	P3-40	*1-564-519-11	PLUG, CONNECTOR 4P
C2056	1-136-161-00	FILM 0.047MF	5%	50V	P3-41	*1-564-519-11	PLUG, CONNECTOR 4P
C2057	1-124-477-11	ELECT 47MF	20%	16V			
C2058	1-163-031-11	CERAMIC CHIP 0.01MF		50V			
C2059	1-136-177-00	FILM 1MF	5%	50V			<TRANSISTOR>
C2060	1-136-153-00	FILM 0.01MF	5%	50V	Q2001	8-729-216-22	TRANSISTOR 2SA1162-G
C2061	1-163-031-11	CERAMIC CHIP 0.01MF		50V	Q2002	8-729-422-27	TRANSISTOR 2SD601A-Q
C2062	1-163-095-00	CERAMIC CHIP 12PF	5%	50V	Q2003	8-729-422-27	TRANSISTOR 2SD601A-Q
C2063	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	Q2004	8-729-216-22	TRANSISTOR 2SA1162-G
C2064	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V	Q2005	8-729-422-27	TRANSISTOR 2SD601A-Q
C2065	1-126-320-11	ELECT 10MF	20%	16V	Q2006	8-729-422-27	TRANSISTOR 2SD601A-Q
C2066	1-126-157-11	ELECT 10MF	20%	16V	Q2007	8-729-216-22	TRANSISTOR 2SA1162-G
C2067	1-126-157-11	ELECT 10MF	20%	16V	Q2008	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R
C2068	1-124-916-11	ELECT 22MF	20%	50V	Q2009	8-729-216-22	TRANSISTOR 2SA1162-G
C2070	1-163-253-11	CERAMIC CHIP 120PF	5%	50V	Q2010	8-729-422-27	TRANSISTOR 2SD601A-Q
C2073	1-124-477-11	ELECT 47MF	20%	16V	Q2011	8-729-216-22	TRANSISTOR 2SA1162-G
C2075	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	Q2012	8-729-216-22	TRANSISTOR 2SA1162-G
				Q2015	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q2016	8-729-422-27	TRANSISTOR 2SD601A-Q	
				Q2017	8-729-422-27	TRANSISTOR 2SD601A-Q	
<COMPOSITION CIRCUIT BLOCK>							
CP2001 1-236-472-11 NETWORK, RES, THICK FILM							
<TRIMMER>							
CV2001 1-141-245-00 CAP, TRIMMER							
<DIODE>							
D2003	8-719-106-16	DIODE RD6.8M-B1		Q2018	8-729-420-81	TRANSISTOR 2SD874A-R	
D2004	8-719-404-46	DIODE MA110		Q2019	8-729-216-22	TRANSISTOR 2SA1162-G	
D2005	8-719-404-46	DIODE MA110		Q2020	8-729-216-22	TRANSISTOR 2SA1162-G	
D2006	8-719-105-45	DIODE RD3.3M-B1		Q2021	8-729-422-27	TRANSISTOR 2SD601A-Q	
D2007	8-719-911-19	DIODE 1SS119		Q2022	8-729-422-27	TRANSISTOR 2SD601A-Q	
<FILTER>							
FL2001 1-235-941-11 YC MODULE							
<IC>							
IC2001	8-759-231-58	IC TA7812S		Q2023	8-729-422-27	TRANSISTOR 2SD601A-Q	
IC2002	8-759-700-48	IC NJM2903S		Q2024	8-729-422-27	TRANSISTOR 2SD601A-Q	
IC2003	8-759-805-37	IC L78LR05D-MA		Q2025	8-729-216-22	TRANSISTOR 2SA1162-G	
IC2004	8-759-066-51	IC MB88733-143		Q2026	8-729-216-22	TRANSISTOR 2SA1162-G	
IC2005	8-759-803-25	IC CXK1006L		Q2027	8-729-216-22	TRANSISTOR 2SA1162-G	
IC2006	8-752-006-12	IC CX20061		Q2028	8-729-216-22	TRANSISTOR 2SA1162-G	
IC2007	8-752-033-32	IC CXA1228S		Q2029	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q2030	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q2031	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q2032	8-729-422-27	TRANSISTOR 2SD601A-Q	
<RESISTOR>							
R2002	▲1-216-357-91	METAL OXIDE	4.7	5%	1W	F	
R2003	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W		
R2004	1-216-049-00	METAL GLAZE	1K	5%	1/10W		
R2006	1-216-689-11	METAL GLAZE	39K	5%	1/10W		
R2007	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W		
R2008	1-216-081-00	METAL GLAZE	22K	5%	1/10W		
R2009	1-216-081-00	METAL GLAZE	22K	5%	1/10W		
R2010	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W		
R2011	1-216-079-00	METAL GLAZE	18K	5%	1/10W		
R2012	1-216-089-00	METAL GLAZE	47K	5%	1/10W		
R2013	1-216-079-00	METAL GLAZE	18K	5%	1/10W		
R2014	1-216-089-00	METAL GLAZE	47K	5%	1/10W		
R2015	1-216-033-00	METAL GLAZE	220	5%	1/10W		
R2016	1-216-295-00	METAL GLAZE	0	5%	1/10W		
R2017	1-216-047-00	METAL GLAZE	820	5%	1/10W		
R2018	1-216-049-00	METAL GLAZE	1K	5%	1/10W		
R2019	1-216-049-00	METAL GLAZE	1K	5%	1/10W		
R2020	1-216-037-00	METAL GLAZE	330	5%	1/10W		
R2021	1-216-095-00	METAL GLAZE	82K	5%	1/10W		
R2022	1-216-109-00	METAL GLAZE	330K	5%	1/10W		
<CONNECTOR>							
J2001	*1-573-962-11	CONNECTOR (MALE) 50P					
<COIL>							
L2002	1-410-663-31	INDUCTOR	10UH				
L2003	1-410-667-31	INDUCTOR	22UH				
L2004	1-410-663-31	INDUCTOR	10UH				
L2009	1-410-663-31	INDUCTOR	10UH				
L2010	1-410-677-31	INDUCTOR	180UH				
L2011	1-410-677-31	INDUCTOR	180UH				
<CONNECTOR>							

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P3

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R2023	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2097	1-216-295-00	METAL GLAZE	0 5% 1/10W
R2024	1-216-047-00	METAL GLAZE	820 5% 1/10W	R2100	1-216-295-00	METAL GLAZE	0 5% 1/10W
R2025	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R2101	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R2026	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R2102	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2027	1-216-033-00	METAL GLAZE	220 5% 1/10W	R2104	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R2028	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2105	1-216-043-00	METAL GLAZE	560 5% 1/10W
R2029	1-216-033-00	METAL GLAZE	220 5% 1/10W	R2106	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2030	1-216-009-00	METAL GLAZE	22 5% 1/10W	R2107	1-216-037-00	METAL GLAZE	330 5% 1/10W
R2031	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R2108	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2032	1-216-033-00	METAL GLAZE	220 5% 1/10W	R2109	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2033	1-216-033-00	METAL GLAZE	220 5% 1/10W	R2110	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2034	1-216-033-00	METAL GLAZE	220 5% 1/10W	R2111	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2035	1-216-033-00	METAL GLAZE	220 5% 1/10W	R2112	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2036	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R2113	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R2037	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R2114	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R2038	1-216-025-00	METAL GLAZE	100 5% 1/10W	R2115	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2039	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R2116	1-216-119-00	METAL GLAZE	820K 5% 1/10W
R2040	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2117	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R2041	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2118	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R2042	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R2119	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R2043	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2122	1-216-295-00	METAL GLAZE	0 5% 1/10W
R2044	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R2124	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2045	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2125	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R2046	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2127	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R2047	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2128	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R2048	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2129	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R2049	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R2130	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R2050	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R2131	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R2051	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2132	1-216-676-11	METAL CHIP	11K 0.50% 1/10W
R2052	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R2133	1-216-025-00	METAL GLAZE	100 5% 1/10W
R2053	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R2134	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R2054	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R2135	1-216-041-00	METAL GLAZE	470 5% 1/10W
R2055	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R2136	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2056	1-216-295-00	METAL GLAZE	0 5% 1/10W	R2137	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2057	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R2138	1-216-295-00	METAL GLAZE	0 5% 1/10W
R2058	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R2139	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R2059	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R2140	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2060	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R2141	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R2061	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R2142	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2062	1-216-295-00	METAL GLAZE	0 5% 1/10W	R2143	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2063	1-216-025-00	METAL GLAZE	100 5% 1/10W	R2144	1-216-025-00	METAL GLAZE	100 5% 1/10W
R2064	1-216-025-00	METAL GLAZE	100 5% 1/10W	R2145	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2074	1-216-033-00	METAL GLAZE	220 5% 1/10W	R2146	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R2075	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R2147	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R2076	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R2148	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R2077	1-216-093-00	METAL GLAZE	68K 5% 1/10W	R2149	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R2078	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R2152	1-216-295-00	METAL GLAZE	0 5% 1/10W
R2079	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W				
R2080	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R2081	1-216-041-00	METAL GLAZE	470 5% 1/10W				
R2082	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R2083	1-216-037-00	METAL GLAZE	330 5% 1/10W	RV2001	1-238-015-11	RES, ADJ, CARBON	4.7K
R2084	1-216-045-00	METAL GLAZE	680 5% 1/10W	RV2002	1-238-019-11	RES, ADJ, CARBON	47K
R2085	1-216-133-00	METAL GLAZE	3.3M 5% 1/10W	RV2003	1-238-017-11	RES, ADJ, CARBON	22K
R2086	1-216-133-00	METAL GLAZE	3.3M 5% 1/10W	RV2004	1-238-017-11	RES, ADJ, CARBON	22K
R2087	1-216-085-00	METAL GLAZE	33K 5% 1/10W				
R2088	1-216-107-00	METAL GLAZE	270K 5% 1/10W				
R2089	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R2090	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R2091	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R2093	1-216-097-00	METAL GLAZE	100K 5% 1/10W				
R2094	1-216-039-00	METAL GLAZE	390 5% 1/10W				
R2095	1-216-107-00	METAL GLAZE	270K 5% 1/10W				
R2096	1-216-105-00	METAL GLAZE	220K 5% 1/10W				

<VARIABLE RESISTOR>

RV2001 1-238-015-11 RES, ADJ, CARBON 4.7K
 RV2002 1-238-019-11 RES, ADJ, CARBON 47K
 RV2003 1-238-017-11 RES, ADJ, CARBON 22K
 RV2004 1-238-017-11 RES, ADJ, CARBON 22K

<TUNER>

TU2001AI-693-102-22 TUNER (BTF-XA401)

<CRYSTAL>

X2001 1-567-192-11 OSCILLATOR, CERAMIC
 X2002 1-567-505-11 OSCILLATOR, CRYSTAL

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				

*A-1297-104-A	A BOARD, COMPLETE (KP-53XBR25(U/C))			C504	1-136-153-00	FILM	0.01MF 5% 50V				
	*****			C507	1-106-383-00	MYLAR	0.047MF 200V				
*A-1297-105-A	A BOARD, COMPLETE (KP-46XBR25/61XBR28)			C508	1-102-973-00	CERAMIC	100PF 5% 50V				
	*****			C509	1-102-030-00	CERAMIC	330PF 10% 500V				
4-382-854-11	SCREW (M3X10), P, SW (+)			C510 ▲	1-136-565-11	FILM	0.015MF 3% 1.4KV				
<CONNECTOR>											
A-1	*1-564-514-11	PLUG, CONNECTOR 11P		C512 ▲	1-136-598-11	FILM	3MF 5% 200V				
A-2	*1-564-512-11	PLUG, CONNECTOR 9P		C513	1-136-153-00	FILM	0.01MF 5% 50V				
A-3	*1-564-507-11	PLUG, CONNECTOR 4P		C514	1-124-477-11	ELECT	47MF 20% 16V				
A-4	*1-564-508-11	PLUG, CONNECTOR 5P		C522	1-123-024-21	ELECT	33MF 160V				
A-5	*1-564-511-51	PLUG, CONNECTOR 8P		C523	1-106-383-00	MYLAR	0.047MF 200V				
A-6	*1-564-507-11	PLUG, CONNECTOR 4P		C528	1-124-662-11	ELECT	220MF 20% 50V				
A-7	*1-564-505-11	PLUG, CONNECTOR 2P		C534	1-124-011-00	ELECT	220MF 20% 16V				
A-9	*1-564-505-11	PLUG, CONNECTOR 2P		C535	1-124-011-00	ELECT	220MF 20% 16V				
A-10	*1-564-511-71	PLUG, CONNECTOR 8P		C536	1-124-662-11	ELECT	220MF 20% 50V				
A-11	*1-564-511-81	PLUG, CONNECTOR 8P		C537	1-124-662-11	ELECT	220MF 20% 50V				
A-12	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P		C539	1-124-907-11	ELECT	10MF 20% 50V				
A-13	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P		C542	1-136-153-00	FILM	0.01MF 5% 50V				
A-14	*1-564-513-11	PLUG, CONNECTOR 10P		C543	1-136-153-00	FILM	0.01MF 5% 50V				
A-15	*1-564-508-11	PLUG, CONNECTOR 5P		C544	1-136-153-00	FILM	0.01MF 5% 50V				
A-16	*1-564-508-11	PLUG, CONNECTOR 5P		C545	1-136-153-00	FILM	0.01MF 5% 50V				
A-17	*1-564-508-11	PLUG, CONNECTOR 5P		C569	1-126-355-11	ELECT	33MF 20% 160V				
A-18	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P		C1401	1-124-910-11	ELECT	47MF 20% 50V				
A-19	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P		C1402	1-126-157-11	ELECT	10MF 20% 16V				
A-20	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P		C1405	1-124-910-11	ELECT	47MF 20% 50V				
A-21	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		C1406	1-126-101-11	ELECT	100MF 20% 16V				
A-22	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P		C1407	1-126-057-11	ELECT	2200MF 20% 50V				
A-25	*1-564-506-11	PLUG, CONNECTOR 3P		C1408	1-136-165-00	FILM	0.1MF 5% 50V				
A-27	*1-573-979-11	CONNECTOR, BOARD TO BOARD 11P		C1409	1-136-165-00	FILM	0.1MF 5% 50V				
A-28	*1-564-508-11	PLUG, CONNECTOR 5P		C1413	1-124-234-00	ELECT	22MF 20% 16V				
A-31	*1-573-960-11	CONNECTOR (FEMALE) 50P		C1424	1-126-057-11	ELECT	2200MF 20% 50V				
A-38	*1-564-505-11	PLUG, CONNECTOR 2P		C1425	1-126-057-11	ELECT	2200MF 20% 50V				
A-56	*1-564-508-11	PLUG, CONNECTOR 5P		C1426	1-126-157-11	ELECT	10MF 20% 16V				
<CAPACITOR>											
C201	1-124-910-11	ELECT	47MF 20% 50V	C1429	1-126-101-11	ELECT	100MF 20% 16V				
C202	1-124-903-11	ELECT	1MF 20% 50V	C1430	1-126-101-11	ELECT	100MF 20% 16V				
C203	1-130-495-00	MYLAR	0.1MF 5% 50V	C1431	1-124-916-11	ELECT	22MF 20% 50V				
C204	1-124-477-11	ELECT	47MF 20% 16V	C1435	1-124-916-11	ELECT	22MF 20% 25V				
C205	1-124-557-11	ELECT	1000MF 20% 25V	C1440	1-126-336-11	ELECT	220MF 20% 25V				
C206	1-126-101-11	ELECT	100MF 20% 16V	C1601	1-130-483-00	MYLAR	0.01MF 5% 50V				
C207	1-124-242-00	ELECT	33MF 20% 16V	C1603	1-136-153-00	FILM	0.01MF 5% 50V				
C210	1-102-121-00	CERAMIC	0.0022MF 10% 50V	C1607	1-124-907-11	ELECT	10MF 20% 50V				
C212	1-126-803-11	ELECT	47MF 20% 16V	C1608	1-136-153-00	FILM	0.01MF 5% 50V				
C213	1-126-103-11	ELECT	470MF 20% 16V	C1609	1-136-153-00	FILM	0.01MF 5% 50V				
C214	1-126-101-11	ELECT	100MF 20% 16V	C1610	1-124-916-11	ELECT	22MF 20% 50V				
C215	1-126-803-11	ELECT	47MF 20% 50V	<DIODE>							
C216	1-126-101-11	ELECT	100MF 20% 16V	D201	8-719-110-13	DIODE RD9.1ESB2					
C217	1-126-803-11	ELECT	47MF 20% 25V	D202	8-719-110-13	DIODE RD9.1ESB2					
C218	1-126-103-11	ELECT	470MF 20% 16V	D203	8-719-911-19	DIODE ISS119					
C219	1-124-443-00	ELECT	100MF 20% 10V	D204	8-719-911-19	DIODE ISS119					
C220	1-126-803-11	ELECT	47MF 20% 25V	D205	8-719-110-36	DIODE RD13ESB2					
C223	1-126-803-11	ELECT	47MF 20% 25V	D206	8-719-911-19	DIODE ISS119					
C224	1-124-261-00	ELECT	10MF 20% 50V	D207	8-719-911-19	DIODE ISS119					
C225	1-124-120-11	ELECT	220MF 20% 16V	D208	8-719-911-19	DIODE ISS119					
C226	1-124-120-11	ELECT	220MF 20% 16V	D209	8-719-911-19	DIODE ISS119					
C227	1-124-621-11	ELECT	3300MF 20% 6.3V	D211	8-719-110-36	DIODE RD13ESB2					
C229	1-126-101-11	ELECT	100MF 20% 16V	D213	8-719-110-78	DIODE RD33ESB2					
C502	1-126-182-11	ELECT	0.47MF 20% 50V	D214	8-719-911-19	DIODE ISS119					
C503	1-130-487-00	MYLAR	0.022MF 5% 50V	D215	8-719-911-19	DIODE ISS119					
				D216	8-719-911-19	DIODE ISS119					
				D217	8-719-911-19	DIODE ISS119					
				D219	8-719-911-19	DIODE ISS119					
				D220	8-719-510-48	DIODE DIN20R					

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK		
R509	△1-216-478-91	METAL OXIDE	390 5% 3W F	R1603	1-249-423-11	CARBON	3.3K 5% 1/4W		
R511	1-249-407-11	CARBON	150 5% 1/4W F	R1604	1-249-405-11	CARBON	100 5% 1/4W		
R512	1-249-421-11	CARBON	2.2K 5% 1/4W F	R1605	1-249-405-11	CARBON	100 5% 1/4W		
R513	1-249-417-11	CARBON	1K 5% 1/4W F	R1606	1-249-405-11	CARBON	100 5% 1/4W		
R514	△1-216-441-91	METAL OXIDE	27K 5% 1W F	R1607	1-249-415-11	CARBON	680 5% 1/4W		
R515	1-249-432-11	CARBON	18K 5% 1/4W F	R1608	1-249-415-11	CARBON	680 5% 1/4W		
R516	1-249-417-11	CARBON	1K 5% 1/4W F	R1609	1-249-415-11	CARBON	680 5% 1/4W		
R517	1-249-427-11	CARBON	6.8K 5% 1/4W F	R1610	1-249-405-11	CARBON	100 5% 1/4W		
R518	1-249-422-11	CARBON	2.7K 5% 1/4W F	R1611	1-249-405-11	CARBON	100 5% 1/4W		
R519	1-249-417-11	CARBON	1K 5% 1/4W F	R1612	1-249-405-11	CARBON	100 5% 1/4W		
R520	△1-215-925-91	METAL OXIDE	22K 5% 3W F	R1613	1-249-423-11	CARBON	3.3K 5% 1/4W		
R521	△1-215-925-91	METAL OXIDE	22K 5% 3W F	R1614	1-249-411-11	CARBON	330 5% 1/4W		
R522	1-249-421-11	CARBON	2.2K 5% 1/4W F	R1622	1-249-423-11	CARBON	3.3K 5% 1/4W		
R523	1-249-434-11	CARBON	27K 5% 1/4W F	R1624	1-249-424-11	CARBON	3.9K 5% 1/4W		
R524	1-249-434-11	CARBON	27K 5% 1/4W F	R1627	1-249-429-11	CARBON	10K 5% 1/4W		
R525	△1-215-922-91	METAL OXIDE	6.8K 5% 3W F	R1630	1-249-434-11	CARBON	27K 5% 1/4W		
R526	1-249-417-11	CARBON	1K 5% 1/4W F	R1631	1-249-433-11	CARBON	22K 5% 1/4W		
R528	△1-216-447-91	METAL OXIDE	27 5% 2W F	R1656	1-249-397-11	CARBON	22 5% 1/4W		
R529	△1-216-447-91	METAL OXIDE	27 5% 2W F	R1657	1-249-397-11	CARBON	22 5% 1/4W		
R530	1-249-431-11	CARBON	15K 5% 1/4W F	R1658	1-249-397-11	CARBON	22 5% 1/4W		
R531	1-249-431-11	CARBON	15K 5% 1/4W F	<TRANSFORMER>					
R532	1-249-385-11	CARBON	2.2 5% 1/4W F	T501	△1-439-545-11	TRANSFORMER, FERRITE			
R533	1-249-405-11	CARBON	100 5% 1/4W F	T502	△1-437-078-11	TRANSFORMER, HORIZONTAL DRIVE			
R534	1-249-405-11	CARBON	100 5% 1/4W F	<TURNER>					
R535	1-249-405-11	CARBON	100 5% 1/4W F	TU101	△1-693-102-22	TUNER (BTF-XA401)			
R536	△1-217-316-11	WIREWOUND	330 10% 5W F	*****					
R537	△1-217-316-11	WIREWOUND	330 10% 5W F	*A-1306-435-A M BOARD, COMPLETE					
R550	1-249-385-11	CARBON	2.2 5% 1/4W F	*****					
R558	1-249-385-11	CARBON	2.2 5% 1/4W F	<CAPACITOR>					
R559	1-249-409-11	CARBON	220 5% 1/4W F	C001	1-124-261-00	ELECT	10MF 20% 50V		
R560	1-249-409-11	CARBON	220 5% 1/4W F	C002	1-163-125-00	CERAMIC CHIP	220PF 5% 50V		
R563	1-249-429-11	CARBON	10K 5% 1/4W F	C003	1-136-161-00	FILM	0.047MF 5% 50V		
R564	1-249-429-11	CARBON	10K 5% 1/4W F	C004	1-126-301-11	ELECT	1MF 20% 50V		
R565	1-249-427-11	CARBON	6.8K 5% 1/4W F	C005	1-163-125-00	CERAMIC CHIP	220PF 5% 50V		
R566	1-249-427-11	CARBON	6.8K 5% 1/4W F	C014	1-124-910-11	ELECT	47MF 20% 50V		
R567	1-249-427-11	CARBON	6.8K 5% 1/4W F	C015	1-124-464-11	ELECT	0.22MF 20% 50V		
R568	1-249-427-11	CARBON	6.8K 5% 1/4W F	C017	1-124-589-11	ELECT	47MF 20% 16V		
R569	1-249-426-11	CARBON	5.6K 5% 1/4W F	C018	1-163-141-00	CERAMIC CHIP	0.001MF 5% 50V		
R570	1-249-441-11	CARBON	100K 5% 1/4W F	C019	1-164-695-11	CERAMIC CHIP	0.0022MF 5% 50V		
R571	1-249-429-11	CARBON	10K 5% 1/4W F	C020	1-163-241-11	CERAMIC CHIP	39PF 5% 50V		
R572	1-249-429-11	CARBON	10K 5% 1/4W F	C021	1-163-239-11	CERAMIC CHIP	33PF 5% 50V		
R574	1-249-417-11	CARBON	1K 5% 1/4W F	C029	1-163-115-00	CERAMIC CHIP	82PF 5% 50V		
R579	1-249-417-11	CARBON	1K 5% 1/4W F	C030	1-163-115-00	CERAMIC CHIP	82PF 5% 50V		
R1401	1-215-445-00	METAL	10K 1% 1/4W F	C034	1-163-125-00	CERAMIC CHIP	220PF 5% 50V		
R1402	1-215-445-00	METAL	10K 1% 1/4W F	C035	1-163-125-00	CERAMIC CHIP	220PF 5% 50V		
R1403	1-215-445-00	METAL	10K 1% 1/4W F	C036	1-163-125-00	CERAMIC CHIP	220PF 5% 50V		
R1404	1-215-445-00	METAL	10K 1% 1/4W F	C041	1-163-117-00	CERAMIC CHIP	100PF 5% 50V		
R1405	1-249-385-11	CARBON	2.2 5% 1/4W F	C042	1-163-117-00	CERAMIC CHIP	100PF 5% 50V		
R1406	1-249-385-11	CARBON	2.2 5% 1/4W F	C045	1-163-125-00	CERAMIC CHIP	220PF 5% 50V		
R1409	1-249-433-11	CARBON	22K 5% 1/4W F	C047	1-124-261-00	ELECT	10MF 20% 50V		
R1410	1-249-433-11	CARBON	22K 5% 1/4W F	C048	1-124-261-00	ELECT	10MF 20% 50V		
R1411	1-249-437-11	CARBON	47K 5% 1/4W F	C049	1-124-261-00	ELECT	10MF 20% 50V		
R1427	△1-215-865-91	METAL OXIDE	220 5% 1W F	C055	1-163-809-11	CERAMIC CHIP	0.047MF 10% 25V		
R1428	△1-215-865-91	METAL OXIDE	220 5% 1W F	C064	1-163-121-00	CERAMIC CHIP	150PF 5% 50V		
R1431	1-249-405-11	CARBON	100 5% 1/4W F	C065	1-124-257-00	ELECT	2.2MF 20% 50V		
R1433	1-249-425-11	CARBON	4.7K 5% 1/4W F						
R1434	1-249-423-11	CARBON	3.3K 5% 1/4W F						
R1439	1-247-883-00	CARBON	150K 5% 1/4W F						
R1440	1-249-417-11	CARBON	1K 5% 1/4W F						
R1442	1-249-398-11	CARBON	27 5% 1/4W F						
R1443	1-249-398-11	CARBON	27 5% 1/4W F						
R1520	1-249-429-11	CARBON	10K 5% 1/4W F						
R1601	1-249-423-11	CARBON	3.3K 5% 1/4W F						
R1602	1-249-417-11	CARBON	1K 5% 1/4W F						

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M

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<DIODE>							
D001	8-719-404-46	DIODE MA110		R014	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
D002	8-719-404-46	DIODE MA110		R015	1-216-089-00	METAL GLAZE	47K 5% 1/10W
D003	8-719-404-46	DIODE MA110		R016	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
D004	8-719-404-46	DIODE MA110		R017	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
D005	8-719-404-46	DIODE MA110		R018	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
D006	8-719-404-46	DIODE MA110		R019	1-216-073-00	METAL GLAZE	10K 5% 1/10W
D007	8-719-404-46	DIODE MA110		R020	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
D008	8-719-404-46	DIODE MA110		R021	1-216-097-00	METAL GLAZE	100K 5% 1/10W
D009	8-719-404-46	DIODE MA110		R022	1-216-089-00	METAL GLAZE	47K 5% 1/10W
D010	8-713-300-57	DIODE IT33		R023	1-216-093-00	METAL GLAZE	68K 5% 1/10W
D011	8-719-404-46	DIODE MA110		R024	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
D012	8-719-404-46	DIODE MA110		R025	1-216-073-00	METAL GLAZE	10K 5% 1/10W
D014	8-719-404-46	DIODE MA110		R026	1-216-081-00	METAL GLAZE	22K 5% 1/10W
D015	8-719-404-46	DIODE MA110		R027	1-216-041-00	METAL GLAZE	470 5% 1/10W
<IC>							
IC001	8-759-169-06	IC TMC73C247-10		R028	1-216-023-00	METAL GLAZE	82 5% 1/10W
IC002	8-759-403-44	IC MN1280-S		R029	1-216-097-00	METAL GLAZE	100K 5% 1/10W
<COIL>							
L001	1-408-409-00	INDUCTOR	10UH	R030	1-216-097-00	METAL GLAZE	100K 5% 1/10W
L002	1-410-476-11	INDUCTOR	33UH	R031	1-216-089-00	METAL GLAZE	47K 5% 1/10W
<CONNECTOR>							
M-39	*1-564-521-11	PLUG, CONNECTOR 6P		R032	1-216-089-00	METAL GLAZE	47K 5% 1/10W
M-45	*1-564-523-11	PLUG, CONNECTOR 8P		R033	1-216-073-00	METAL GLAZE	10K 5% 1/10W
M-001	1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P		R034	1-216-033-00	METAL GLAZE	220 5% 1/10W
<TRANSISTOR>							
Q001	8-729-216-22	TRANSISTOR 2SA1162-G		R035	1-216-033-00	METAL GLAZE	220 5% 1/10W
Q002	8-729-216-22	TRANSISTOR 2SA1162-G		R036	1-216-033-00	METAL GLAZE	220 5% 1/10W
Q003	8-729-216-22	TRANSISTOR 2SA1162-G		R037	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q004	8-729-422-27	TRANSISTOR 2SD601A-Q		R038	1-216-033-00	METAL GLAZE	220 5% 1/10W
Q005	8-729-422-27	TRANSISTOR 2SD601A-Q		R039	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q006	8-729-216-22	TRANSISTOR 2SA1162-G		R040	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q007	8-729-216-22	TRANSISTOR 2SA1162-G		R041	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
Q008	8-729-422-27	TRANSISTOR 2SD601A-Q		R042	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
Q009	8-729-422-27	TRANSISTOR 2SD601A-Q		R043	1-216-033-00	METAL GLAZE	220 5% 1/10W
Q010	8-729-422-27	TRANSISTOR 2SD601A-Q		R044	1-216-033-00	METAL GLAZE	220 5% 1/10W
Q011	8-729-422-27	TRANSISTOR 2SD601A-Q		R045	1-216-025-00	METAL GLAZE	100 5% 1/10W
Q012	8-729-422-27	TRANSISTOR 2SD601A-Q		R046	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
Q013	8-729-216-22	TRANSISTOR 2SA1162-G		R047	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
Q014	8-729-422-27	TRANSISTOR 2SD601A-Q		R048	1-216-033-00	METAL GLAZE	220 5% 1/10W
<RESISTOR>							
R001	1-216-045-00	METAL GLAZE	680 5% 1/10W	R049	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R002	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R050	1-216-295-00	METAL GLAZE	0 5% 1/10W
R003	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R051	1-216-033-00	METAL GLAZE	220 5% 1/10W
R004	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R052	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R005	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R053	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R006	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R054	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R007	1-216-027-00	METAL GLAZE	120 5% 1/10W	R055	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R008	1-216-041-00	METAL GLAZE	470 5% 1/10W	R056	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R009	1-216-027-00	METAL GLAZE	120 5% 1/10W	R057	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R011	1-216-033-00	METAL GLAZE	220 5% 1/10W	R058	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R012	1-216-033-00	METAL GLAZE	220 5% 1/10W	R059	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R013	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R060	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
				R063	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R064	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
				R065	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R066	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R067	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R068	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R069	1-216-049-00	METAL GLAZE	1K 5% 1/10W
				R070	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R071	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R072	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R073	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
				R074	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R075	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R076	1-216-089-00	METAL GLAZE	47K 5% 1/10W
				R077	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
				R078	1-216-033-00	METAL GLAZE	220 5% 1/10W

M

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
R079	1-216-025-00	METAL GLAZE	100 5%	1/10W	C336	1-126-301-11	ELECT	1MF 20% 50V
R080	1-216-061-00	METAL GLAZE	3.3K 5%	1/10W	C337	1-126-301-11	ELECT	1MF 20% 50V
R081	1-216-033-00	METAL GLAZE	220 5%	1/10W	C338	1-124-584-00	ELECT	100MF 20% 10V
R082	1-216-033-00	METAL GLAZE	220 5%	1/10W	C339	1-124-791-11	ELECT	1MF 20% 50V
R083	1-216-033-00	METAL GLAZE	220 5%	1/10W	C340	1-163-009-11	CERAMIC CHIP	0.001MF 10% 50V
R084	1-216-097-00	METAL GLAZE	100K 5%	1/10W	C341	1-126-157-11	ELECT	10MF 20% 16V
R085	1-216-033-00	METAL GLAZE	220 5%	1/10W	C342	1-124-465-00	ELECT	0.47MF 20% 50V
R086	1-216-033-00	METAL GLAZE	220 5%	1/10W	C343	1-124-589-11	ELECT	47MF 20% 16V
R087	1-216-033-00	METAL GLAZE	220 5%	1/10W	C344	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R088	1-216-033-00	METAL GLAZE	220 5%	1/10W	C345	1-124-767-00	ELECT	2.2MF 20% 50V
R089	1-216-089-00	METAL GLAZE	47K 5%	1/10W	C346	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
R090	1-216-033-00	METAL GLAZE	220 5%	1/10W	C347	1-136-169-00	FILM	0.22MF 5% 50V
R091	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W	C348	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
R092	1-216-077-00	METAL GLAZE	15K 5%	1/10W	C349	1-126-301-11	ELECT	1MF 20% 50V
R093	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W	C350	1-126-301-11	ELECT	1MF 20% 50V
R094	1-216-033-00	METAL GLAZE	220 5%	1/10W	C351	1-163-002-11	CERAMIC CHIP	270PF 10% 50V
R095	1-216-073-00	METAL GLAZE	10K 5%	1/10W	C352	1-164-489-11	CERAMIC CHIP	0.22MF 10% 16V
R096	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W	C353	1-126-163-11	ELECT	4.7MF 20% 50V
R097	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W	C354	1-136-169-00	FILM	0.22MF 5% 50V
R098	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W	C355	1-124-465-00	ELECT	0.47MF 20% 50V
R099	1-216-089-00	METAL GLAZE	47K 5%	1/10W	C356	1-163-017-00	CERAMIC CHIP	0.0047MF 10% 50V
R100	1-216-025-00	METAL GLAZE	100 5%	1/10W	C357	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
R101	1-216-025-00	METAL GLAZE	100 5%	1/10W	C358	1-124-767-00	ELECT	2.2MF 20% 50V
R102	1-216-089-00	METAL GLAZE	47K 5%	1/10W	C360	1-137-491-11	FILM CHIP	0.1MF 5% 25V
R103	1-216-033-00	METAL GLAZE	220 5%	1/10W	C361	1-126-301-11	ELECT	1MF 20% 50V
R104	1-216-033-00	METAL GLAZE	220 5%	1/10W	C362	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V
				C363	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	
				C364	1-126-301-11	ELECT	1MF 20% 50V	
				C365	1-164-343-11	CERAMIC CHIP	0.056MF 10% 25V	
<CRYSTAL>								
X001	1-579-743-11	VIBRATOR, CRYSTAL			C366	1-124-257-00	ELECT	2.2MF 20% 50V
				C367	1-126-157-11	ELECT	10MF 20% 16V	
				C368	1-124-234-00	ELECT	22MF 20% 16V	
				C369	1-163-001-11	CERAMIC CHIP	220PF 10% 50V	
				C370	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	
*A-1346-138-A E1 BOARD, COMPLETE								
				C371	1-124-126-00	ELECT	47MF 20% 16V	
				C372	1-124-589-11	ELECT	47MF 20% 16V	
				C373	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	
				C378	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	
				C379	1-164-232-11	CERAMIC CHIP	0.01MF 10% 50V	
				C380	1-163-137-00	CERAMIC CHIP	680PF 5% 50V	
				C381	1-163-101-00	CERAMIC CHIP	22PF 5% 50V	
				C382	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	
				C383	1-164-004-11	CERAMIC CHIP	0.1MF 10% 25V	
				C384	1-163-095-00	CERAMIC CHIP	12PF 5% 50V	
<CAPACITOR>								
C301	1-163-010-11	CERAMIC CHIP	0.0012MF	10%	50V			
C303	1-126-157-11	ELECT	10MF	20%	16V			
C304	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V			
C305	1-163-251-11	CERAMIC CHIP	100PF	5%	50V			
C306	1-163-117-00	CERAMIC CHIP	100PF	5%	50V			
C309	1-164-505-11	CERAMIC CHIP	2.2MF		16V			
C310	1-163-109-00	CERAMIC CHIP	47PF	5%	50V			
C314	1-124-915-11	ELECT	10MF	20%	16V			
C315	1-164-505-11	CERAMIC CHIP	2.2MF		16V			
C319	1-126-157-11	ELECT	10MF	20%	16V			
								<DIODE>
C320	1-124-465-00	ELECT	0.47MF	20%	50V	D301	8-719-404-46	DIODE MA110
C321	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	D302	8-719-404-46	DIODE MA110
C322	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	D303	8-719-404-46	DIODE MA110
C323	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	D304	8-719-404-46	DIODE MA110
C324	1-124-234-00	ELECT	22MF	20%	16V	D305	8-719-404-46	DIODE MA110
C325	1-104-563-11	FILM CHIP	0.1MF	5%	16V	D306	8-719-158-15	DIODE RD5.6SB
C326	1-104-563-11	FILM CHIP	0.1MF	5%	16V	D307	8-719-404-46	DIODE MA110
C327	1-104-563-11	FILM CHIP	0.1MF	5%	16V	D310	8-719-158-15	DIODE RD5.6SB
C328	1-126-157-11	ELECT	10MF	20%	16V	D312	8-719-404-46	DIODE MA110
C329	1-126-157-11	ELECT	10MF	20%	16V	D313	8-719-404-46	DIODE MA110
C330	1-126-157-11	ELECT	10MF	20%	16V	D314	8-719-404-46	DIODE MA110
C331	1-126-301-11	ELECT	1MF	20%	50V	D315	8-719-404-46	DIODE MA110
C332	1-124-584-00	ELECT	100MF	20%	10V	D316	8-719-404-46	DIODE MA110
C333	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V	D317	8-719-404-46	DIODE MA110
C334	1-137-491-11	FILM CHIP	0.1MF	5%	25V	D318	8-719-404-46	DIODE MA110
C335	1-136-169-00	FILM	0.22MF	5%	50V	D319	8-719-404-46	DIODE MA110
						D320	8-719-404-46	DIODE MA110

E1

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D321	8-719-400-94	DIODE MA3130		R304	1-216-081-00	METAL GLAZE	22K 5% 1/10W
		<CONNECTOR>		R305	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
E1-24	*1-564-523-11	PLUG, CONNECTOR 8P		R306	1-216-081-00	METAL GLAZE	22K 5% 1/10W
E1-25	*1-564-521-11	PLUG, CONNECTOR 6P		R307	1-216-089-00	METAL GLAZE	47K 5% 1/10W
E1-26	*1-564-522-11	PLUG, CONNECTOR 7P		R308	1-216-037-00	METAL GLAZE	330 5% 1/10W
E1-001	1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P		R309	1-216-073-00	METAL GLAZE	10K 5% 1/10W
		<DELAY LINE>		R310	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
DL302	1-415-817-11	DELAY LINE		R312	1-216-043-00	METAL GLAZE	560 5% 1/10W
		<IC>		R313	1-216-035-00	METAL GLAZE	270 5% 1/10W
IC301	8-752-058-68	IC CXA1315M		R314	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
IC302	8-752-057-68	IC CXA1464AS		R316	1-216-035-00	METAL GLAZE	270 5% 1/10W
IC303	8-759-106-02	IC UPC4570G2		R317	1-216-121-00	METAL GLAZE	1M 5% 1/10W
		<COIL>		R320	1-216-039-00	METAL GLAZE	390 5% 1/10W
L301	1-410-064-11	INDUCTOR 2.7MMH		R325	1-216-033-00	METAL GLAZE	220 5% 1/10W
L307	1-410-944-31	INDUCTOR CHIP 15UH		R326	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
L308	1-410-946-31	INDUCTOR CHIP 22UH		R331	1-216-017-00	METAL GLAZE	47 5% 1/10W
		<TRANSISTOR>		R332	1-216-657-11	METAL CHIP	1.8K 0.50% 1/10W
Q301	8-729-925-79	TRANSISTOR IMX3		R333	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
Q302	8-729-925-79	TRANSISTOR IMX3		R336	1-216-047-00	METAL GLAZE	820 5% 1/10W
Q303	8-729-422-27	TRANSISTOR 2SD601A-Q		R338	1-216-043-00	METAL GLAZE	560 5% 1/10W
Q304	8-729-907-46	TRANSISTOR IMZ1		R339	1-216-047-00	METAL GLAZE	820 5% 1/10W
Q305	8-729-925-79	TRANSISTOR IMX3		R340	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
Q306	8-729-422-27	TRANSISTOR 2SD601A-Q		R341	1-216-043-00	METAL GLAZE	560 5% 1/10W
Q307	8-729-903-10	TRANSISTOR FMW1		R343	1-216-077-00	METAL GLAZE	15K 5% 1/10W
Q309	8-729-422-27	TRANSISTOR 2SD601A-Q		R344	1-216-081-00	METAL GLAZE	22K 5% 1/10W
Q310	8-729-422-27	TRANSISTOR 2SD601A-Q		R345	1-216-292-11	METAL GLAZE	8.2M 5% 1/8W
Q311	8-729-403-27	TRANSISTOR XN4401		R346	1-216-081-00	METAL GLAZE	22K 5% 1/10W
Q312	8-729-422-27	TRANSISTOR 2SD601A-Q		R347	1-216-081-00	METAL GLAZE	22K 5% 1/10W
Q314	8-729-403-27	TRANSISTOR XN4401		R348	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q315	8-729-422-27	TRANSISTOR 2SD601A-Q		R349	1-216-295-00	METAL GLAZE	0 5% 1/10W
Q316	8-729-422-27	TRANSISTOR 2SD601A-Q		R350	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q317	8-729-216-22	TRANSISTOR 2SA1162-G		R351	1-216-674-11	METAL CHIP	9.1K 0.50% 1/10W
Q321	8-729-925-79	TRANSISTOR IMX3		R352	1-216-011-00	METAL GLAZE	27 5% 1/10W
Q322	8-729-216-22	TRANSISTOR 2SA1162-G		R353	1-216-001-00	METAL GLAZE	10 5% 1/10W
Q323	8-729-422-27	TRANSISTOR 2SD601A-Q		R354	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q324	8-729-216-22	TRANSISTOR 2SA1162-G		R355	1-216-001-00	METAL GLAZE	10 5% 1/10W
Q325	8-729-216-22	TRANSISTOR 2SA1162-G		R356	1-216-001-00	METAL GLAZE	10 5% 1/10W
Q326	8-729-422-27	TRANSISTOR 2SD601A-Q		R357	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q327	8-729-422-27	TRANSISTOR 2SD601A-Q		R358	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q328	8-729-422-27	TRANSISTOR 2SD601A-Q		R359	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q329	8-729-925-79	TRANSISTOR IMX3		R360	1-216-119-00	METAL GLAZE	820K 5% 1/10W
Q330	8-729-925-79	TRANSISTOR IMX3		R361	1-216-025-00	METAL GLAZE	100 5% 1/10W
Q333	8-729-925-79	TRANSISTOR IMX3		R362	1-216-079-00	METAL GLAZE	18K 5% 1/10W
Q334	8-729-422-27	TRANSISTOR 2SD601A-Q		R363	1-216-295-00	METAL GLAZE	0 5% 1/10W
Q335	8-729-907-46	TRANSISTOR IMZ1		R364	1-216-045-00	METAL GLAZE	680 5% 1/10W
Q340	8-729-422-27	TRANSISTOR 2SD601A-Q		R365	1-216-017-00	METAL GLAZE	47 5% 1/10W
Q342	8-729-925-79	TRANSISTOR IMX3		R366	1-216-001-00	METAL GLAZE	10 5% 1/10W
Q344	8-729-216-22	TRANSISTOR 2SA1162-G		R367	1-216-045-00	METAL GLAZE	680 5% 1/10W
		<RESISTOR>		R368	1-216-001-00	METAL GLAZE	10 5% 1/10W
R301	1-216-025-00	METAL GLAZE	100 5% 1/10W	R369	1-216-033-00	METAL GLAZE	220 5% 1/10W
R302	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R370	1-216-033-00	METAL GLAZE	220 5% 1/10W
R303	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R371	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R372	1-216-031-00	METAL GLAZE	180 5% 1/10W
				R373	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W
				R374	1-216-037-00	METAL GLAZE	330 5% 1/10W
				R375	1-216-037-00	METAL GLAZE	330 5% 1/10W
				R376	1-216-037-00	METAL GLAZE	330 5% 1/10W
				R377	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R378	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R379	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R380	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R381	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R382	1-216-033-00	METAL GLAZE	220 5% 1/10W

E1

E2

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK		
R383	1-216-653-11	METAL CHIP	1.2K 0.50%	1/10W	R1350	1-216-091-00	METAL GLAZE	56K 5%	1/10W
R384	1-216-041-00	METAL GLAZE	470 5%	1/10W	R1351	1-216-049-00	METAL GLAZE	1K 5%	1/10W
R385	1-216-081-00	METAL GLAZE	22K 5%	1/10W	R1352	1-216-039-00	METAL GLAZE	390 5%	1/10W
R386	1-216-687-11	METAL CHIP	33K 0.50%	1/10W	R1353	1-216-053-00	METAL GLAZE	1.5K 5%	1/10W
R387	1-216-033-00	METAL GLAZE	220 5%	1/10W	R1354	1-216-081-00	METAL GLAZE	22K 5%	1/10W
R388	1-216-033-00	METAL GLAZE	220 5%	1/10W	R1355	1-216-017-00	METAL GLAZE	47 5%	1/10W
R389	1-216-081-00	METAL GLAZE	22K 5%	1/10W	R1356	1-216-057-00	METAL GLAZE	2.2K 5%	1/10W
R390	1-216-033-00	METAL GLAZE	220 5%	1/10W	R1357	1-216-081-00	METAL GLAZE	22K 5%	1/10W
R391	1-216-049-00	METAL GLAZE	1K 5%	1/10W	R1358	1-216-033-00	METAL GLAZE	220 5%	1/10W
R393	1-216-051-00	METAL GLAZE	1.2K 5%	1/10W	R1362	1-216-105-00	METAL GLAZE	220K 5%	1/10W
R394	1-216-109-00	METAL GLAZE	330K 5%	1/10W	R1363	1-216-041-00	METAL GLAZE	470 5%	1/10W
R395	1-216-071-00	METAL GLAZE	8.2K 5%	1/10W	R1364	1-216-053-00	METAL GLAZE	1.5K 5%	1/10W
R396	1-216-105-00	METAL GLAZE	220K 5%	1/10W	R1373	1-216-049-00	METAL GLAZE	1K 5%	1/10W
R397	1-216-081-00	METAL GLAZE	22K 5%	1/10W	R1374	1-216-025-00	METAL GLAZE	100 5%	1/10W
R398	1-216-081-00	METAL GLAZE	22K 5%	1/10W	R1379	1-216-079-00	METAL GLAZE	18K 5%	1/10W
R399	1-216-077-00	METAL GLAZE	15K 5%	1/10W	R1380	1-216-075-00	METAL GLAZE	12K 5%	1/10W
R1301	1-216-049-00	METAL GLAZE	1K 5%	1/10W	R1381	1-216-041-00	METAL GLAZE	470 5%	1/10W
R1302	1-216-045-00	METAL GLAZE	680 5%	1/10W	R1382	1-216-079-00	METAL GLAZE	18K 5%	1/10W
R1303	1-216-085-00	METAL GLAZE	33K 5%	1/10W	R1383	1-216-077-00	METAL GLAZE	15K 5%	1/10W
R1304	1-216-081-00	METAL GLAZE	22K 5%	1/10W	R1384	1-216-049-00	METAL GLAZE	1K 5%	1/10W
R1305	1-216-025-00	METAL GLAZE	100 5%	1/10W	R1385	1-216-037-00	METAL GLAZE	330 5%	1/10W
R1306	1-216-057-00	METAL GLAZE	2.2K 5%	1/10W	R1386	1-216-037-00	METAL GLAZE	330 5%	1/10W
R1307	1-216-073-00	METAL GLAZE	10K 5%	1/10W	R1387	1-216-045-00	METAL GLAZE	680 5%	1/10W
R1308	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W	R1388	1-216-001-00	METAL GLAZE	10 5%	1/10W
R1309	1-216-025-00	METAL GLAZE	100 5%	1/10W	R1389	1-216-097-00	METAL GLAZE	100K 5%	1/10W
R1310	1-216-045-00	METAL GLAZE	680 5%	1/10W	R1390	1-216-097-00	METAL GLAZE	100K 5%	1/10W
R1311	1-216-049-00	METAL GLAZE	1K 5%	1/10W	R1391	1-216-097-00	METAL GLAZE	100K 5%	1/10W
R1312	1-216-073-00	METAL GLAZE	10K 5%	1/10W	R1392	1-216-081-00	METAL GLAZE	22K 5%	1/10W
R1313	1-216-081-00	METAL GLAZE	22K 5%	1/10W	R1394	1-216-081-00	METAL GLAZE	22K 5%	1/10W
R1314	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W	R1395	1-216-081-00	METAL GLAZE	22K 5%	1/10W
R1315	1-216-049-00	METAL GLAZE	1K 5%	1/10W	R1396	1-216-125-00	METAL GLAZE	1.5M 5%	1/10W
R1316	1-216-081-00	METAL GLAZE	22K 5%	1/10W	R1399	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W
R1317	1-216-073-00	METAL GLAZE	10K 5%	1/10W	R5301	1-216-057-00	METAL GLAZE	2.2K 5%	1/10W
R1318	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W	R5302	1-216-073-00	METAL GLAZE	10K 5%	1/10W
R1319	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W	R5303	1-216-073-00	METAL GLAZE	10K 5%	1/10W
R1320	1-216-063-00	METAL GLAZE	3.9K 5%	1/10W	R5304	1-216-085-00	METAL GLAZE	33K 5%	1/10W
R1321	1-216-081-00	METAL GLAZE	22K 5%	1/10W	R5305	1-216-085-00	METAL GLAZE	33K 5%	1/10W
R1322	1-216-061-00	METAL GLAZE	3.3K 5%	1/10W					
R1323	1-216-089-00	METAL GLAZE	47K 5%	1/10W					
R1324	1-216-045-00	METAL GLAZE	680 5%	1/10W					
R1325	1-216-025-00	METAL GLAZE	100 5%	1/10W	X301	1-567-505-11	OSCILLATOR, CRYSTAL		
R1326	1-216-073-00	METAL GLAZE	10K 5%	1/10W					
R1327	1-216-033-00	METAL GLAZE	220 5%	1/10W					
R1328	1-216-033-00	METAL GLAZE	220 5%	1/10W					
R1329	1-216-077-00	METAL GLAZE	15K 5%	1/10W					
R1330	1-216-081-00	METAL GLAZE	22K 5%	1/10W					
R1331	1-216-081-00	METAL GLAZE	22K 5%	1/10W					
R1332	1-216-093-00	METAL GLAZE	68K 5%	1/10W					
R1333	1-216-129-00	METAL GLAZE	2.2M 5%	1/10W					
R1334	1-216-097-00	METAL GLAZE	100K 5%	1/10W					
R1335	1-216-089-00	METAL GLAZE	47K 5%	1/10W					
R1336	1-216-089-00	METAL GLAZE	47K 5%	1/10W					
R1337	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W					
R1338	1-216-089-00	METAL GLAZE	47K 5%	1/10W					
R1339	1-216-089-00	METAL GLAZE	47K 5%	1/10W					
R1340	1-216-073-00	METAL GLAZE	10K 5%	1/10W					
R1342	1-216-033-00	METAL GLAZE	220 5%	1/10W					
R1343	1-216-105-00	METAL GLAZE	220K 5%	1/10W					
R1344	1-216-091-00	METAL GLAZE	56K 5%	1/10W					
R1345	1-216-101-00	METAL GLAZE	150K 5%	1/10W					
R1346	1-216-049-00	METAL GLAZE	1K 5%	1/10W					
R1347	1-216-049-00	METAL GLAZE	1K 5%	1/10W					
R1348	1-216-049-00	METAL GLAZE	1K 5%	1/10W					
R1349	1-216-073-00	METAL GLAZE	10K 5%	1/10W					
					C2302	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
					C2303	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
					C2310	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
					C2313	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
					C2314	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
					C2315	1-126-157-11	ELECT 10MF	20%	16V
					C2316	1-126-157-11	ELECT 10MF	20%	16V
					C2317	1-126-157-11	ELECT 10MF	20%	16V
					C2318	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
					C2320	1-124-589-11	ELECT 47MF	20%	16V
					C2321	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
					C2322	1-124-234-00	ELECT 22MF	20%	16V
					C2323	1-124-234-00	ELECT 22MF	20%	16V
					C2324	1-124-234-00	ELECT 22MF	20%	16V
					C2325	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C2326	1-124-589-11	ELECT 47MF	20%	16V	Q2310	8-729-403-27	TRANSISTOR XN4401
C2327	1-164-505-11	CERAMIC CHIP 2.2MF		16V	Q2311	8-729-903-10	TRANSISTOR FMW1
C2328	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	Q2312	8-729-403-27	TRANSISTOR XN4401
C2329	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	Q2313	8-729-903-10	TRANSISTOR FMW1
C2331	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	Q2314	8-729-403-27	TRANSISTOR XN4401
C2332	1-124-234-00	ELECT 22MF	20%	16V	Q2315	8-729-903-10	TRANSISTOR FMW1
C2333	1-124-234-00	ELECT 22MF	20%	16V	Q2317	8-729-216-22	TRANSISTOR 2SA1162-G
C2334	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	Q2318	8-729-216-22	TRANSISTOR 2SA1162-G
C2335	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	Q2319	8-729-216-22	TRANSISTOR 2SA1162-G
C2336	1-126-163-11	ELECT 4.7MF	20%	16V	Q2320	8-729-422-27	TRANSISTOR 2SD601A-Q
C2337	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	Q2321	8-729-422-27	TRANSISTOR 2SD601A-Q
C2338	1-163-038-00	CERAMIC CHIP 0.1MF		25V	Q2322	8-729-422-27	TRANSISTOR 2SD601A-Q
C2340	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	Q2324	8-729-216-22	TRANSISTOR 2SA1162-G
C2345	1-164-505-11	CERAMIC CHIP 2.2MF		16V	Q2326	8-729-422-27	TRANSISTOR 2SD601A-Q
C2346	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	Q2327	8-729-422-27	TRANSISTOR 2SD601A-Q
C2347	1-163-367-11	CERAMIC CHIP 39PF	5%	50V	Q2330	8-729-903-10	TRANSISTOR FMW1
C2349	1-164-505-11	CERAMIC CHIP 2.2MF		16V	Q2337	8-729-925-79	TRANSISTOR IMX3
C2350	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	Q2338	8-729-422-27	TRANSISTOR 2SD601A-Q
C2351	1-164-505-11	CERAMIC CHIP 2.2MF		16V	Q2339	8-729-422-27	TRANSISTOR 2SD601A-Q
C2352	1-164-505-11	CERAMIC CHIP 2.2MF		16V	Q2340	8-729-422-27	TRANSISTOR 2SD601A-Q
C2353	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	Q2341	8-729-422-27	TRANSISTOR 2SD601A-Q
C2354	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	Q2342	8-729-422-27	TRANSISTOR 2SD601A-Q
C2357	1-126-301-11	ELECT 1MF	20%	50V	Q2345	8-729-422-27	TRANSISTOR 2SD601A-Q
C2360	1-163-109-00	CERAMIC CHIP 47PF	5%	50V			

<DIODE>

D2306	8-719-404-46	DIODE MA110
D2307	8-719-946-98	DIODE FMN1
D2308	8-719-946-98	DIODE FMN1
D2309	8-719-404-46	DIODE MA110
D2312	8-719-404-46	DIODE MA110
D2313	8-719-404-46	DIODE MA110
D2314	8-713-300-57	DIODE 1T33
D2317	8-719-404-46	DIODE MA110

<CONNECTOR>

E2-25 *1-564-521-11	PLUG, CONNECTOR 6P
E2-26 *1-564-522-11	PLUG, CONNECTOR 7P
E2-46 *1-564-518-11	PLUG, CONNECTOR 3P
E2-002 1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P

<IC>

IC2301	8-759-066-52	IC PCA8510T/012-T
IC2303	8-759-925-75	IC SN74HC05ANS
IC2304	8-752-037-15	IC CXA1387S
IC2306	8-759-011-65	IC MC74HC4053F
IC2307	8-752-058-68	IC CXA1315M

<COIL>

L2304	1-408-414-00	INDUCTOR 27UH
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<TRANSISTOR>

Q2301	8-729-903-10	TRANSISTOR FMW1
Q2303	8-729-403-27	TRANSISTOR XN4401
Q2304	8-729-925-79	TRANSISTOR IMX3
Q2305	8-729-903-10	TRANSISTOR FMW1
Q2306	8-729-403-27	TRANSISTOR XN4401
Q2307	8-729-403-27	TRANSISTOR XN4401
Q2308	8-729-403-27	TRANSISTOR XN4401
Q2309	8-729-903-10	TRANSISTOR FMW1

<RESISTOR>

R2302	1-216-049-00	METAL GLAZE 1K	5%	1/10W
R2303	1-216-049-00	METAL GLAZE 1K	5%	1/10W
R2304	1-216-049-00	METAL GLAZE 1K	5%	1/10W
R2305	1-216-033-00	METAL GLAZE 220	5%	1/10W
R2306	1-216-045-00	METAL GLAZE 680	5%	1/10W
R2307	1-216-045-00	METAL GLAZE 680	5%	1/10W
R2308	1-216-045-00	METAL GLAZE 680	5%	1/10W
R2309	1-216-041-00	METAL GLAZE 470	5%	1/10W
R2310	1-216-055-00	METAL GLAZE 1.8K	5%	1/10W
R2311	1-216-025-00	METAL GLAZE 100	5%	1/10W
R2312	1-216-043-00	METAL GLAZE 560	5%	1/10W
R2313	1-216-055-00	METAL GLAZE 1.8K	5%	1/10W
R2314	1-216-061-00	METAL GLAZE 3.3K	5%	1/10W
R2315	1-216-081-00	METAL GLAZE 22K	5%	1/10W
R2317	1-216-041-00	METAL GLAZE 470	5%	1/10W
R2318	1-216-055-00	METAL GLAZE 1.8K	5%	1/10W
R2319	1-216-079-00	METAL GLAZE 18K	5%	1/10W
R2320	1-216-061-00	METAL GLAZE 3.3K	5%	1/10W
R2321	1-216-063-00	METAL GLAZE 3.9K	5%	1/10W
R2322	1-216-049-00	METAL GLAZE 1K	5%	1/10W
R2323	1-216-067-00	METAL GLAZE 5.6K	5%	1/10W
R2324	1-216-049-00	METAL GLAZE 1K	5%	1/10W
R2325	1-216-049-00	METAL GLAZE 1K	5%	1/10W
R2326	1-216-061-00	METAL GLAZE 3.3K	5%	1/10W
R2327	1-216-063-00	METAL GLAZE 3.9K	5%	1/10W
R2328	1-216-025-00	METAL GLAZE 100	5%	1/10W
R2329	1-216-025-00	METAL GLAZE 100	5%	1/10W
R2330	1-216-061-00	METAL GLAZE 3.3K	5%	1/10W
R2331	1-216-063-00	METAL GLAZE 3.9K	5%	1/10W
R2332	1-216-025-00	METAL GLAZE 100	5%	1/10W
R2333	1-216-067-00	METAL GLAZE 5.6K	5%	1/10W
R2334	1-216-295-00	METAL GLAZE 0	5%	1/10W
R2335	1-216-295-00	METAL GLAZE 0	5%	1/10W
R2336	1-216-295-00	METAL GLAZE 0	5%	1/10W
R2337	1-216-033-00	METAL GLAZE 220	5%	1/10W
R2338	1-216-081-00	METAL GLAZE 22K	5%	1/10W
R2340	1-216-049-00	METAL GLAZE 1K	5%	1/10W

E2

Y2

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R2341	1-216-041-00	METAL GLAZE	470 5% 1/10W	R3321	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R2342	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R3323	1-216-091-00	METAL GLAZE	56K 5% 1/10W
R2343	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R3324	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2344	1-216-033-00	METAL GLAZE	220 5% 1/10W	R3325	1-216-025-00	METAL GLAZE	100 5% 1/10W
R2345	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R3328	1-216-001-00	METAL GLAZE	10 5% 1/10W
R2346	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R3330	1-216-033-00	METAL GLAZE	220 5% 1/10W
R2347	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R3331	1-216-033-00	METAL GLAZE	220 5% 1/10W
R2350	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R3332	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R2351	1-216-033-00	METAL GLAZE	220 5% 1/10W	R3339	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R2352	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R3340	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2353	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R3341	1-216-677-11	METAL CHIP	12K 0.50% 1/10W
R2354	1-216-210-00	METAL GLAZE	3.3K 5% 1/8W	R3342	1-216-670-11	METAL CHIP	6.2K 0.50% 1/10W
R2355	1-216-178-00	METAL GLAZE	150 5% 1/8W	R3343	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2356	1-216-677-11	METAL CHIP	12K 0.50% 1/10W	R3344	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2357	1-216-670-11	METAL CHIP	6.2K 0.50% 1/10W	R3349	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2359	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R3350	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R2360	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R3351	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R2361	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R3353	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R2362	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R3354	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R2363	1-216-041-00	METAL GLAZE	470 5% 1/10W	R3361	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R2364	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R3362	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R2365	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R3364	1-216-295-00	METAL GLAZE	0 5% 1/10W
R2366	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R3365	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R2367	1-216-043-00	METAL GLAZE	560 5% 1/10W	R3367	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R2368	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R3368	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R2371	1-216-033-00	METAL GLAZE	220 5% 1/10W	R3369	1-216-001-00	METAL GLAZE	10 5% 1/10W
R2374	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R3370	1-216-001-00	METAL GLAZE	10 5% 1/10W
R2375	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R3371	1-216-001-00	METAL GLAZE	10 5% 1/10W
R2376	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R3374	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R2377	1-216-025-00	METAL GLAZE	100 5% 1/10W	R3392	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R2378	1-216-025-00	METAL GLAZE	100 5% 1/10W	R3401	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R2379	1-216-043-00	METAL GLAZE	560 5% 1/10W	X2301	1-577-071-11	VIBRATOR, CERAMIC	
R2380	1-216-043-00	METAL GLAZE	560 5% 1/10W				
R2381	1-216-043-00	METAL GLAZE	560 5% 1/10W				
R2382	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R2384	1-216-081-00	METAL GLAZE	22K 5% 1/10W				
R2385	1-216-075-00	METAL GLAZE	12K 5% 1/10W				
R2386	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R2387	1-216-025-00	METAL GLAZE	100 5% 1/10W				
R2388	1-216-017-00	METAL GLAZE	47 5% 1/10W				
R2390	1-216-043-00	METAL GLAZE	560 5% 1/10W				
R2393	1-216-017-00	METAL GLAZE	47 5% 1/10W				
R2394	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R2395	1-216-001-00	METAL GLAZE	10 5% 1/10W				
R2397	1-216-043-00	METAL GLAZE	560 5% 1/10W				
R2399	1-216-001-00	METAL GLAZE	10 5% 1/10W				
R3301	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C401	1-124-234-00	ELECT	22MF 20% 16V
R3302	1-216-001-00	METAL GLAZE	10 5% 1/10W	C424	1-126-301-11	ELECT	1MF 20% 50V
R3303	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	C425	1-126-301-11	ELECT	1MF 20% 50V
R3304	1-216-091-00	METAL GLAZE	56K 5% 1/10W	C426	1-126-301-11	ELECT	1MF 20% 50V
R3306	1-216-089-00	METAL GLAZE	47K 5% 1/10W	C427	1-124-465-00	ELECT	0.47MF 20% 50V
R3307	1-216-085-00	METAL GLAZE	33K 5% 1/10W	C428	1-126-163-11	ELECT	4.7MF 20% 50V
R3308	1-216-043-00	METAL GLAZE	560 5% 1/10W	C429	1-124-478-11	ELECT	100MF 20% 25V
R3309	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C430	1-124-261-00	ELECT	10MF 20% 50V
R3310	1-216-001-00	METAL GLAZE	10 5% 1/10W	C431	1-126-301-11	ELECT	1MF 20% 50V
R3311	1-216-081-00	METAL GLAZE	22K 5% 1/10W	C432	1-126-301-11	ELECT	1MF 20% 50V
R3312	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C433	1-131-347-00	TANTALUM	1MF 20% 16V
R3313	1-216-083-00	METAL GLAZE	27K 5% 1/10W	C434	1-126-301-11	ELECT	1MF 20% 50V
R3314	1-216-689-11	METAL GLAZE	39K 5% 1/10W	C435	1-130-309-00	FILM	0.033MF 5% 100V
R3315	1-216-077-00	METAL GLAZE	15K 5% 1/10W	C436	1-126-301-11	ELECT	1MF 20% 50V
R3316	1-216-077-00	METAL GLAZE	15K 5% 1/10W	C437	1-130-487-00	MYLAR	0.022MF 5% 50V
R3318	1-216-091-00	METAL GLAZE	56K 5% 1/10W	C438	1-126-301-11	ELECT	1MF 20% 50V
R3319	1-216-081-00	METAL GLAZE	22K 5% 1/10W	C439	1-124-034-51	ELECT	33MF 20% 16V
R3320	1-216-017-00	METAL GLAZE	47 5% 1/10W	C440	1-126-301-11	ELECT	1MF 20% 50V

<CRYSTAL>

*A-1394-442-A Y2 BOARD, COMPLETE

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK
C441	1-126-301-11	ELECT	1MF	20%	50V				
C442	1-124-261-00	ELECT	10MF	20%	50V				
C443	1-124-589-11	ELECT	47MF	20%	16V				
C444	1-126-163-11	ELECT	4.7MF	20%	50V				
C445	1-126-163-11	ELECT	4.7MF	20%	50V	Q404	8-729-216-22	TRANSISTOR 2SA1162-G	
C446	1-124-234-00	ELECT	22MF	20%	16V	Q405	8-729-216-22	TRANSISTOR 2SA1162-G	
C447	1-126-301-11	ELECT	1MF	20%	50V	Q409	8-729-422-27	TRANSISTOR 2SD601A-Q	
C448	1-136-170-00	FILM	0.27MF	5%	50V	Q410	8-729-422-27	TRANSISTOR 2SD601A-Q	
C449	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V				
C450	1-130-475-00	MYLAR	0.0022MF	5%	50V				
C451	1-124-261-00	ELECT	10MF	20%	50V	R447	1-216-033-00	METAL GLAZE	220 5% 1/10W
C452	1-124-261-00	ELECT	10MF	20%	50V	R453	1-216-033-00	METAL GLAZE	220 5% 1/10W
C453	1-130-475-00	MYLAR	0.0022MF	5%	50V	R464	1-216-081-00	METAL GLAZE	22K 5% 1/10W
C454	1-131-368-00	TANTALUM	3.3MF	10%	16V	R465	1-216-081-00	METAL GLAZE	22K 5% 1/10W
C455	1-131-347-00	TANTALUM	1MF	20%	16V	R466	1-216-025-00	METAL GLAZE	100 5% 1/10W
C456	1-136-171-00	FILM	0.33MF	5%	50V	R467	1-216-033-00	METAL GLAZE	220 5% 1/10W
C457	1-136-175-00	FILM	0.68MF	5%	50V	R468	1-216-033-00	METAL GLAZE	220 5% 1/10W
C458	1-126-101-11	ELECT	100MF	20%	16V	R469	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
C459	1-126-101-11	ELECT	100MF	20%	16V	R470	1-216-033-00	METAL GLAZE	220 5% 1/10W
C460	1-126-101-11	ELECT	100MF	20%	16V	R471	1-216-033-00	METAL GLAZE	220 5% 1/10W
C461	1-124-499-11	ELECT	1MF	20%	50V	R472	1-216-686-11	METAL CHIP	30K 0.50% 1/10W
C462	1-124-499-11	ELECT	1MF	20%	50V	R473	1-216-295-00	METAL GLAZE	0 5% 1/10W
C465	1-130-485-00	MYLAR	0.015MF	5%	50V	R474	1-216-295-00	METAL GLAZE	0 5% 1/10W
C466	1-130-485-00	MYLAR	0.015MF	5%	50V	R475	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
C467	1-136-169-00	FILM	0.22MF	5%	50V	R476	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W
C468	1-136-169-00	FILM	0.22MF	5%	50V	R477	1-216-676-11	METAL CHIP	11K 0.50% 1/10W
C469	1-126-157-11	ELBCT	10MF	20%	16V	R478	1-216-089-00	METAL GLAZE	47K 5% 1/10W
C470	1-126-157-11	ELBCT	10MF	20%	16V	R479	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W
C471	1-124-589-11	ELBCT	47MF	20%	16V	R480	1-216-676-11	METAL CHIP	11K 0.50% 1/10W
C472	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	R481	1-216-089-00	METAL GLAZE	47K 5% 1/10W
C473	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	R482	1-216-089-00	METAL GLAZE	47K 5% 1/10W
C474	1-124-234-00	ELECT	22MF	20%	16V	R483	1-216-089-00	METAL GLAZE	47K 5% 1/10W
C475	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	R485	1-216-073-00	METAL GLAZE	10K 5% 1/10W
C476	1-124-234-00	ELECT	22MF	20%	16V	R486	1-216-073-00	METAL GLAZE	10K 5% 1/10W
C477	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	R488	1-216-295-00	METAL GLAZE	0 5% 1/10W
C478	1-124-478-11	ELBCT	100MF	20%	25V	R494	1-216-025-00	METAL GLAZE	100 5% 1/10W
C479	1-126-163-11	ELECT	4.7MF	20%	50V	R495	1-216-025-00	METAL GLAZE	100 5% 1/10W
C480	1-124-768-11	ELBCT	4.7MF	20%	50V	R496	1-216-025-00	METAL GLAZE	100 5% 1/10W
C481	1-124-768-11	ELECT	4.7MF	20%	50V	R497	1-216-033-00	METAL GLAZE	220 5% 1/10W
C482	1-126-163-11	ELBCT	4.7MF	20%	50V	R498	1-216-025-00	METAL GLAZE	100 5% 1/10W
C483	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	R499	1-216-025-00	METAL GLAZE	100 5% 1/10W
C484	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	R500	1-216-081-00	METAL GLAZE	22K 5% 1/10W
C485	1-163-038-00	CERAMIC CHIP	0.1MF	25V		R501	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W
C487	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	R502	1-216-033-00	METAL GLAZE	220 5% 1/10W
C488	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	R503	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
					R504	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W	
					R507	1-216-295-00	METAL GLAZE	0 5% 1/10W	
D405	8-719-107-13	DIODE RD18M-B1			R509	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	
D406	8-719-107-13	DIODE RD18M-B1			R510	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	
D407	8-719-107-13	DIODE RD18M-B1			R512	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	
D408	8-719-105-83	DIODE RD5.1M-B3			R513	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W	
D409	8-719-981-50	DIODE RB100A			R515	1-216-295-00	METAL GLAZE	0 5% 1/10W	
D410	8-719-981-50	DIODE RB100A			R517	1-216-025-00	METAL GLAZE	100 5% 1/10W	
D413	8-719-158-19	DIODE RD6.2SB			R518	1-216-089-00	METAL GLAZE	47K 5% 1/10W	
D414	8-719-158-55	DIODE RD15SB			R519	1-216-295-00	METAL GLAZE	0 5% 1/10W	
D415	8-719-158-55	DIODE RD15SB			R521	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	
					R522	1-216-033-00	METAL GLAZE	220 5% 1/10W	
					R523	1-216-033-00	METAL GLAZE	220 5% 1/10W	
					R524	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	
					R525	1-216-049-00	METAL GLAZE	1K 5% 1/10W	
					R526	1-216-049-00	METAL GLAZE	1K 5% 1/10W	
IC403	8-759-996-43	IC RC4558PS			R527	1-218-753-11	METAL CHIP	110K 0.50% 1/10W	
IC404	8-759-067-24	IC 24C04AI/P			R528	1-216-689-11	METAL CHIP	39K 0.50% 1/10W	
IC406	8-752-037-24	IC CXA1264AS			R529	1-216-097-00	METAL GLAZE	100K 5% 1/10W	
IC407	8-759-245-75	IC TA8184P							
IC408	8-752-057-18	IC CXA1315P							

Y2

P2

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
R531	1-216-097-00	METAL GLAZE	100K 5%	1/10W	C3040	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
R532	1-216-097-00	METAL GLAZE	100K 5%	1/10W	C3041	1-124-034-51	ELECT 33MF	20% 16V
R533	1-216-097-00	METAL GLAZE	100K 5%	1/10W	C3042	1-130-491-00	MYLAR 0.047MF	5% 50V
R535	1-216-049-00	METAL GLAZE	1K 5%	1/10W	C3043	1-124-465-00	ELECT 0.47MF	20% 50V
R536	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W	C3044	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
R537	1-216-049-00	METAL GLAZE	1K 5%	1/10W	C3045	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
R538	1-218-753-11	METAL CHIP	110K 0.50%	1/10W	C3046	1-126-177-11	ELECT 100MF	20% 6.3V
R539	1-216-689-11	METAL CHIP	39K 0.50%	1/10W	C3047	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
R540	1-216-025-00	METAL GLAZE	100 5%	1/10W	C3049	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
R541	1-216-025-00	METAL GLAZE	100 5%	1/10W	C3050	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
R542	1-216-025-00	METAL GLAZE	100 5%	1/10W	C3051	1-124-034-51	ELECT 33MF	20% 16V
R543	1-216-025-00	METAL GLAZE	100 5%	1/10W	C3052	1-126-101-11	ELECT 100MF	20% 50V
R546	1-216-682-11	METAL CHIP	20K 0.50%	1/10W	C3054	1-124-261-00	ELECT 10MF	20% 25V
R547	1-216-682-11	METAL CHIP	20K 0.50%	1/10W	C3057	1-124-478-11	ELECT 100MF	20% 25V
				C3058	1-124-478-11	ELECT 100MF	20% 25V	

<CONNECTOR>

Y2-401 1-573-966-11 PIN, CONNECTOR (PC BOARD) 36P

<COMPOSITION CIRCUIT BLOCK>

*A-1195-067-A P2 BOARD, COMPLETE

<CAPACITOR>

C3001	1-163-111-00	CERAMIC CHIP 56PF	5%	50V
C3002	1-163-127-00	CERAMIC CHIP 270PF	5%	50V
C3003	1-163-127-00	CERAMIC CHIP 270PF	5%	50V
C3004	1-124-034-51	ELECT 33MF	20%	16V
C3005	1-124-034-51	ELECT 33MF	20%	16V

D3002	8-713-300-57	DIODE 1T33
D3003	8-713-300-57	DIODE 1T33
D3004	8-719-404-46	DIODE MA110

C3006	1-126-177-11	ELECT 100MF	20%	6.3V
C3007	1-126-177-11	ELECT 100MF	20%	6.3V
C3008	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C3009	1-163-119-00	CERAMIC CHIP 120PF	5%	50V
C3010	1-163-117-00	CERAMIC CHIP 100PF	5%	50V

FL3001	1-236-129-11	ENCAPSULATED COMPONENT
FL3002	1-236-129-11	ENCAPSULATED COMPONENT
FL3003	1-236-129-11	ENCAPSULATED COMPONENT
FL3004	1-236-071-11	ENCAPSULATED COMPONENT
FL3005	1-236-071-11	ENCAPSULATED COMPONENT

C3011	1-163-119-00	CERAMIC CHIP 120PF	5%	50V
C3012	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C3013	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C3014	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C3015	1-130-483-00	MYLAR 0.01MF	5%	50V

FL3006	1-236-129-11	ENCAPSULATED COMPONENT
FL3007	1-236-164-11	ENCAPSULATED COMPONENT
FL3008	1-236-163-11	ENCAPSULATED COMPONENT
FL3009	1-236-164-11	ENCAPSULATED COMPONENT
FL3010	1-236-129-11	ENCAPSULATED COMPONENT

C3016	1-126-177-11	ELECT 100MF	20%	6.3V
C3017	1-126-301-11	ELECT 1MF	20%	50V
C3018	1-130-477-00	MYLAR 0.0033MF	5%	50V
C3019	1-163-127-00	CERAMIC CHIP 270PF	5%	50V
C3020	1-163-121-00	CERAMIC CHIP 150PF	5%	50V

FL3011	1-236-163-11	ENCAPSULATED COMPONENT
FL3012	1-236-163-11	ENCAPSULATED COMPONENT
FL3013	1-236-163-11	ENCAPSULATED COMPONENT
FL3014	1-236-129-11	ENCAPSULATED COMPONENT

C3021	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C3022	1-163-115-00	CERAMIC CHIP 82PF	5%	50V
C3023	1-126-301-11	ELECT 1MF	20%	50V
C3024	1-126-177-11	ELECT 100MF	20%	6.3V
C3025	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V

IC3001	8-759-032-11	IC MC74HC04AF
IC3002	8-759-032-11	IC MC74HC04AF
IC3003	8-752-332-83	IC CXD1220AQ
IC3004	8-759-605-15	IC M5M4C500L-10
IC3005	8-759-605-14	IC M52678P

C3026	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C3027	1-124-034-51	ELECT 33MF	20%	16V
C3028	1-163-085-00	CERAMIC CHIP 2PF	0.25PF	50V
C3029	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C3030	1-124-034-51	ELECT 33MF	20%	16V

IC3006	8-759-605-15	IC M5M4C500L-10
IC3007	8-759-011-65	IC MC74HC4053P
IC3008	8-759-605-15	IC M5M4C500L-10
IC3009	8-759-605-14	IC M52678P

C3031	1-126-096-11	ELECT 10MF	20%	25V
C3032	1-130-479-00	MYLAR 0.0047MF	5%	50V
C3033	1-124-465-00	ELECT 0.47MF	20%	50V
C3034	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C3035	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V

IC3010	8-759-112-06	IC UPC78N05H
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C3036	1-124-034-51	ELECT 33MF	20%	16V
C3037	1-126-163-11	ELECT 4.7MF	20%	50V
C3038	1-124-034-51	ELECT 33MF	20%	16V
C3039	1-126-163-11	ELECT 4.7MF	20%	50V

J3001	*1-573-965-11	PIN, CONNECTOR (PC BOARD) 50P
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<CONNECTOR>

Les composants identifiés par une trame et une marque sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark are critical for safety.
Replace only with part number specified.

P2

X3

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
<COIL>											
L3001	1-410-470-11	INDUCTOR	10UH	R3033	1-216-041-00	METAL GLAZE	470 5% 1/10W				
L3002	1-410-470-11	INDUCTOR	10UH	R3034	1-216-033-00	METAL GLAZE	220 5% 1/10W				
L3003	1-410-470-11	INDUCTOR	10UH	R3035	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
L3004	1-410-470-11	INDUCTOR	10UH	R3036	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
L3005	1-408-421-00	INDUCTOR	100UH	R3037	1-216-047-00	METAL GLAZE	820 5% 1/10W				
L3006	1-408-421-00	INDUCTOR	100UH	R3038	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W				
L3007	1-408-424-00	INDUCTOR	180UH	R3039	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W				
L3008	1-408-427-00	INDUCTOR	330UH	R3040	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
<CONNECTOR>											
P2-40 *1-564-519-11 PLUG, CONNECTOR 4P											
<TRANSISTOR>											
Q3001	8-729-422-27	TRANSISTOR	2SD601A-Q	R3043	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
Q3002	8-729-422-27	TRANSISTOR	2SD601A-Q	R3044	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
Q3003	8-729-216-22	TRANSISTOR	2SA1162-G	R3045	1-216-077-00	METAL GLAZE	15K 5% 1/10W				
Q3004	8-729-422-27	TRANSISTOR	2SD601A-Q	R3046	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
Q3005	8-729-216-22	TRANSISTOR	2SA1162-G	R3047	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
Q3006	8-729-216-22	TRANSISTOR	2SA1162-G	R3048	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
Q3007	8-729-216-22	TRANSISTOR	2SA1162-G	R3049	1-216-662-11	METAL CHIP	3K 0.50% 1/10W				
Q3008	8-729-216-22	TRANSISTOR	2SA1162-G	R3050	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W				
Q3009	8-729-422-27	TRANSISTOR	2SD601A-Q	R3051	1-216-089-00	METAL GLAZE	47K 5% 1/10W				
Q3010	8-729-422-27	TRANSISTOR	2SD601A-Q	R3052	1-216-295-00	METAL GLAZE	0 5% 1/10W				
Q3011	8-729-422-27	TRANSISTOR	2SD601A-Q	R3054	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W				
Q3012	8-729-422-27	TRANSISTOR	2SD601A-Q	R3055	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W				
Q3013	8-729-422-27	TRANSISTOR	2SD601A-Q	R3056	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W				
Q3014	8-729-422-27	TRANSISTOR	2SD601A-Q	R3057	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W				
Q3015	8-729-422-27	TRANSISTOR	2SD601A-Q	R3058	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
<RESISTOR>											
R3001	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R3059	1-216-689-11	METAL GLAZE	39K 5% 1/10W				
R3002	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R3060	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W				
R3003	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R3061	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W				
R3005	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R3062	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W				
R3006	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R3063	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
R3007	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R3064	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W				
R3008	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R3065	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R3009	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R3066	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R3010	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R3067	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W				
R3011	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R3068	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W				
R3012	1-216-093-00	METAL GLAZE	68K 5% 1/10W	R3069	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W				
R3013	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R3070	1-216-047-00	METAL GLAZE	820 5% 1/10W				
R3014	1-216-091-00	METAL GLAZE	56K 5% 1/10W	R3071	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W				
R3015	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R3072	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W				
R3016	1-216-093-00	METAL GLAZE	68K 5% 1/10W	R3073	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W				
R3017	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R3074	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
R3018	1-216-091-00	METAL GLAZE	56K 5% 1/10W	R3080 1-216-358-91	METAL OXIDE	5.6 5%	1W F				
R3019	1-216-049-00	METAL GLAZE	1K 5% 1/10W	<VARIABLE RESISTOR>							
R3020	1-216-017-00	METAL GLAZE	47 5% 1/10W	RV3001	1-238-012-11	RES, ADJ, CARBON 1K					
R3021	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	RV3002	1-238-012-11	RES, ADJ, CARBON 1K					
R3022	1-216-049-00	METAL GLAZE	1K 5% 1/10W	<COIL>							
R3024	1-216-049-00	METAL GLAZE	1K 5% 1/10W	T3001	1-404-607-11	COIL					
R3025	1-216-033-00	METAL GLAZE	220 5% 1/10W	T3002	1-404-607-11	COIL					
R3026	1-216-049-00	METAL GLAZE	1K 5% 1/10W	*****							
R3027	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	*A-1394-446-A X3 BOARD, COMPLETE							
R3028	1-216-033-00	METAL GLAZE	220 5% 1/10W	*****							
R3029	1-216-043-00	METAL GLAZE	560 5% 1/10W	C2501	1-124-477-11	ELECT	47MF	20%	16V		
R3030	1-216-043-00	METAL GLAZE	560 5% 1/10W	C2502	1-124-477-11	ELECT	47MF	20%	16V		
R3031	1-216-043-00	METAL GLAZE	560 5% 1/10W	C2505	1-124-638-11	ELECT	22MF	20%	6.3V		
R3032	1-216-077-00	METAL GLAZE	15K 5% 1/10W	C2506	1-126-177-11	ELECT	100MF	20%	10V		

X3

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C2507	1-126-163-11	ELECT 4.7MF	20%	16V			
C2508	1-163-109-00	CERAMIC CHIP 47PF	5%	50V			
C2509	1-126-163-11	ELECT 4.7MF	20%	50V			
C2512	1-163-031-11	CERAMIC CHIP 0.01MF		50V			
C2513	1-163-109-00	CERAMIC CHIP 47PF	5%	50V			
C2514	1-126-163-11	ELECT 4.7MF	20%	16V			
C2516	1-126-163-11	ELECT 4.7MF	20%	50V			
C2517	1-163-031-11	CERAMIC CHIP 0.01MF		50V			
C2518	1-163-031-11	CERAMIC CHIP 0.01MF		50V			
C2519	1-163-031-11	CERAMIC CHIP 0.01MF		50V			
C2520	1-163-031-11	CERAMIC CHIP 0.01MF		50V	FL2501	1-236-164-11	ENCAPSULATED COMPONENT
C2521	1-163-088-00	CERAMIC CHIP 5PF	0.25PF	50V	FL2503	1-236-164-11	ENCAPSULATED COMPONENT
C2522	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	FL2505	1-236-164-11	ENCAPSULATED COMPONENT
C2523	1-163-100-00	CERAMIC CHIP 20PF	5%	50V	FL2506	1-236-129-11	ENCAPSULATED COMPONENT
C2524	1-163-031-11	CERAMIC CHIP 0.01MF		50V	FL2507	1-236-129-11	ENCAPSULATED COMPONENT
C2525	1-163-031-11	CERAMIC CHIP 0.01MF		50V	FL2508	1-236-129-11	ENCAPSULATED COMPONENT
C2526	1-163-031-11	CERAMIC CHIP 0.01MF		50V	FL2509	1-236-129-11	ENCAPSULATED COMPONENT
C2527	1-163-031-11	CERAMIC CHIP 0.01MF		50V			
C2528	1-163-031-11	CERAMIC CHIP 0.01MF		50V			
C2529	1-163-031-11	CERAMIC CHIP 0.01MF		50V			
C2532	1-126-163-11	ELECT 4.7MF	20%	16V	IC2501	8-759-052-52	IC L78M05T-FA
C2536	1-124-589-11	ELECT 47MF	20%	16V	IC2502	8-759-031-31	IC MC33174M
C2537	1-163-031-11	CERAMIC CHIP 0.01MF		50V	IC2503	8-752-344-45	IC CXD2555Q
C2540	1-126-163-11	ELECT 4.7MF	20%	16V	IC2504	8-752-343-18	IC CXD2704Q
C2544	1-163-031-11	CERAMIC CHIP 0.01MF		50V	IC2506	8-759-031-31	IC MC33174M
C2545	1-163-031-11	CERAMIC CHIP 0.01MF		50V	IC2507	8-752-344-45	IC CXD2555Q
C2546	1-163-031-11	CERAMIC CHIP 0.01MF		50V	IC2508	8-752-835-59	IC CXP5068H-081Q
C2547	1-163-031-11	CERAMIC CHIP 0.01MF		50V	IC2509	8-759-042-02	IC S-80743AL-A7-S
C2548	1-163-031-11	CERAMIC CHIP 0.01MF		50V	IC2510	8-752-332-80	IC CXD1160AQ
C2549	1-163-031-11	CERAMIC CHIP 0.01MF		50V	IC2511	8-759-932-21	IC MB81256-12PSZ
C2550	1-163-031-11	CERAMIC CHIP 0.01MF		50V	IC2512	8-759-069-14	IC M51132L
C2551	1-163-031-11	CERAMIC CHIP 0.01MF		50V	IC2513	8-759-100-96	IC UPC4558G2
C2552	1-163-031-11	CERAMIC CHIP 0.01MF		50V			
C2553	1-126-177-11	ELECT 100MF	20%	10V			
C2554	1-163-033-00	CERAMIC CHIP 0.022MF		50V	J2501	*1-573-966-11	PIN, CONNECTOR (PC BOARD) 36P
C2557	1-163-031-11	CERAMIC CHIP 0.01MF		50V	J2501	1-573-966-11	PIN, CONNECTOR (PC BOARD) 36P
C2558	1-163-031-11	CERAMIC CHIP 0.01MF		50V			
C2560	1-126-163-11	ELECT 4.7MF	20%	16V			
C2561	1-163-263-11	CERAMIC CHIP 330PF	5%	50V			
C2562	1-163-018-00	CERAMIC CHIP 0.0056MF	10%	50V	L2501	1-410-204-31	INDUCTOR CHIP 10UH
C2563	1-164-695-11	CERAMIC CHIP 0.0022MF	5%	50V	L2504	1-410-204-31	INDUCTOR CHIP 10UH
C2566	1-126-163-11	ELECT 4.7MF	20%	16V	L2505	1-410-196-11	INDUCTOR CHIP 2.2UH
C2569	1-164-695-11	CERAMIC CHIP 0.0022MF	5%	50V	L2510	1-410-204-31	INDUCTOR CHIP 10UH
C2570	1-163-018-00	CERAMIC CHIP 0.0056MF	10%	50V	L2511	1-410-204-31	INDUCTOR CHIP 10UH
C2571	1-163-263-11	CERAMIC CHIP 330PF	5%	50V	L2512	1-410-204-31	INDUCTOR CHIP 10UH
C2572	1-164-695-11	CERAMIC CHIP 0.0022MF	5%	50V	L2513	1-410-204-31	INDUCTOR CHIP 10UH
C2573	1-163-263-11	CERAMIC CHIP 330PF	5%	50V	L2514	1-410-204-31	INDUCTOR CHIP 10UH
C2574	1-163-018-00	CERAMIC CHIP 0.0056MF	10%	50V	L2515	1-410-204-31	INDUCTOR CHIP 10UH
C2575	1-163-031-11	CERAMIC CHIP 0.01MF		50V	L2516	1-410-204-31	INDUCTOR CHIP 10UH
C2577	1-124-465-00	ELECT 0.47MF	20%	50V	L2517	1-410-204-31	INDUCTOR CHIP 10UH
C2578	1-124-465-00	ELECT 0.47MF	20%	50V			
C2579	1-163-018-00	CERAMIC CHIP 0.0056MF	10%	50V			
C2580	1-163-263-11	CERAMIC CHIP 330PF	5%	50V			
C2581	1-164-695-11	CERAMIC CHIP 0.0022MF	5%	50V	Q2501	8-729-422-27	TRANSISTOR 2SD601A-Q
C2582	1-124-234-00	ELECT 22MF	20%	16V			
C2583	1-124-589-11	ELECT 47MF	20%	16V			
C2590	1-135-179-21	TANTAL. CHIP 2.2MF	20%	16V			
C2591	1-135-179-21	TANTAL. CHIP 2.2MF	20%	16V	R2501	1-216-097-00	METAL GLAZE 100K 5% 1/10W
C2592	1-135-179-21	TANTAL. CHIP 2.2MF	20%	16V	R2502	1-216-699-11	METAL CHIP 100K 0.50% 1/10W
C2593	1-135-179-21	TANTAL. CHIP 2.2MF	20%	16V	R2505	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W
					R2506	1-216-667-11	METAL CHIP 4.7K 0.50% 1/10W
					R2507	1-216-097-00	METAL GLAZE 100K 5% 1/10W
					R2508	1-216-699-11	METAL CHIP 100K 0.50% 1/10W
					R2509	1-216-097-00	METAL GLAZE 100K 5% 1/10W
<DIODE>							
D2501	8-719-404-46	DIODE MA110					